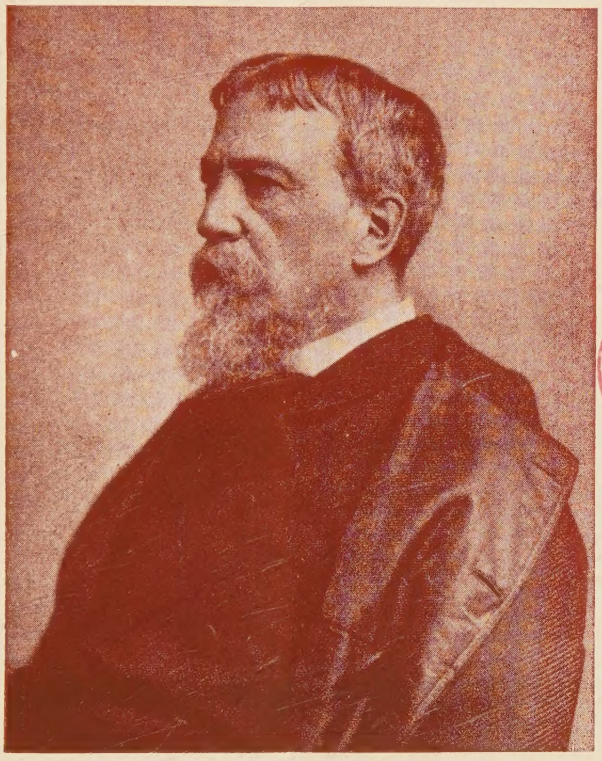
83

MEDICAL RECORD



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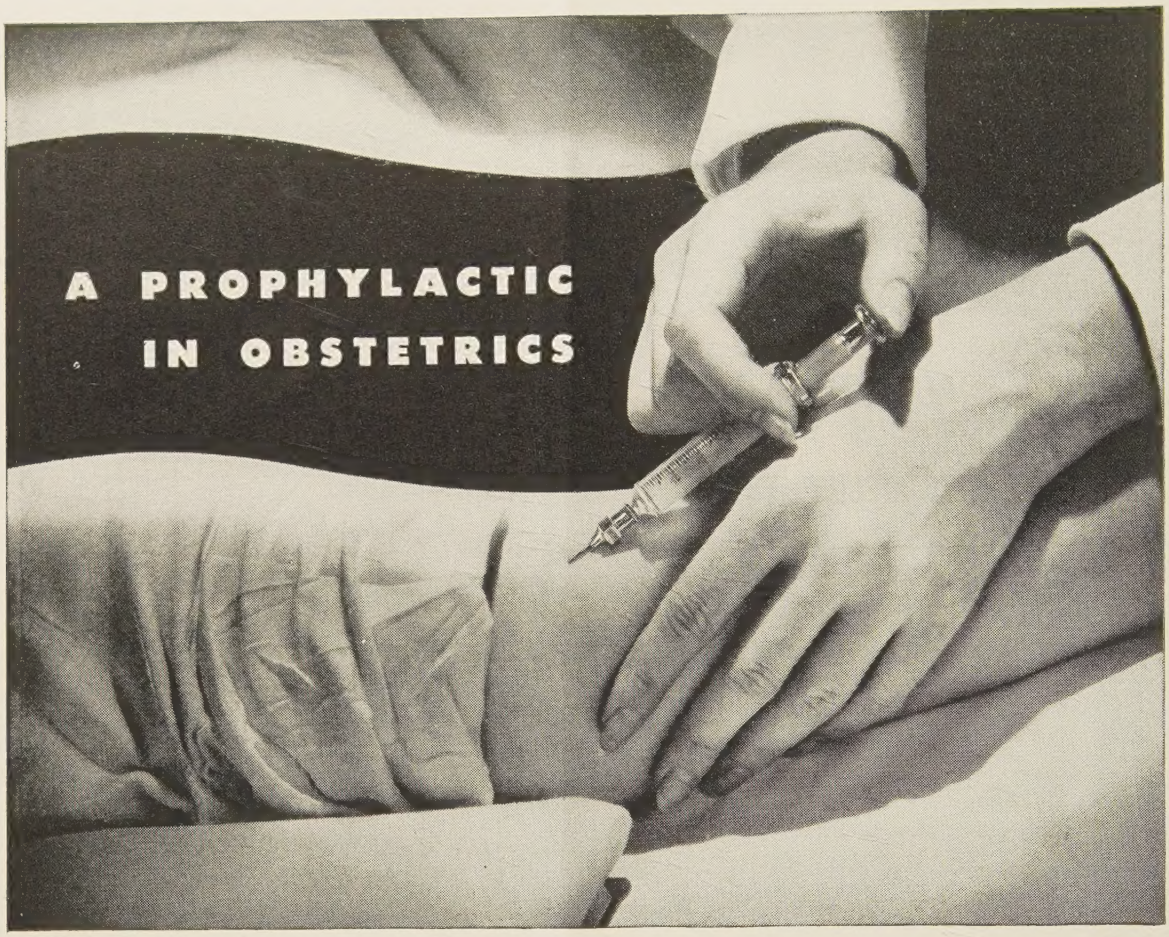

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OPEN FORUM 6

EDITORIALS 38

PAPERS AND ADDRESSES

Use of Allantoin-Sulfanilamide Ointment in Skin Infections
Paul E. Gordon and *James A. Bernardin*, Philadelphia, Pa. 25

From the Ground Up
William Seaman Bainbridge, New York, N. Y. 28

Ice as a Local Anesthetic
Halley H. Friederwitzer, Bronx, N. Y. 42

Hair
Herman Goodman, New York, N. Y. 43

Max Neuburger's Letters *(Continued from page 764, December 1943)*
Solomon R. Kagan, Roxbury, Mass. 10

SYMPOSIUM ON NEUROPSYCHIATRY

Psychotherapy in Urology
A. L. Wolbarst, New York, N. Y. 29

Referred Pain in Fibrositis
Zikmund Winter, New York, N. Y. 34

NEWS ITEMS 40

BOOK REVIEWS 44

CRITIQUE 45

MEDICOLEGAL NOTES 46

OUR CONTRIBUTORS 22

MISCELLANY 48

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THE PHYSIOLOGIC AID TO NORMAL EVACUATION

Compressed Medical Curricula in Britain

Clinical training for medical students has been compressed into thirty months by most of the British medical schools (*Brit. Med. Jour.*, Sept. 4, 1943). This has been done largely by eliminating vacations, and dovetailing clinical work. The change has not been easy, causing strain on teaching staffs and lowering certain standards.

At Oxford and Cambridge, premedical training in physics, chemistry and biology permits the beginning of work on anatomy and physiology during the first year, to prepare for the B.M. examination in these subjects in the sixth term. The second B.M. examinations are now taken four terms ahead of the former time. At Oxford, in particular, a certain number of students are given their entire medical course there, instead of continuing at a London or Provincial teaching hospital. This plan gives unusual opportunities for the student in special fields, such as ophthalmology, for which Oxford is noted. Reduction of the required period of hospital practice to less than thirty-three months has also been permitted.

Cambridge, in anticipation of government needs, had already cut the compulsory period of preclinical study from three years to two, so that the total time for medical study now stands at five. This has considerably increased the number of medical students qualifying for active work. In addition, the requirement of reading for honors has been suspended temporarily, although a large number of men have voluntarily taken the tripos courses anyway.

The various medical schools in London seem to have adjusted themselves without difficulty to the new requirement whereby thirty-six or thirty-two months of study are compressed into thirty. In the London School of Medicine the change has necessitated the dovetailing of clinical work, but the details of the course have not been changed.

Concentration of teaching is under way in many provincial schools while teaching of introductory subjects is being closely correlated with clinical teaching. Many more women than formerly are studying medicine, but difficulty in requirements still seems to hamper their full use.

In the Scottish Schools, Edinburgh still requires five years at the University, but has expedited the course for selected students to enable them to qualify six months ahead of the normal time by utilizing the summer vacations. In Glasgow, qualification has also been accelerated. Aberdeen still maintains a seventeen term course, but has introduced extra terms during vacation periods. Here compulsory courses in typical medicine have been introduced. At St. Andrews full teaching terms have been placed in the summer.

Pediatrics is gaining in importance, as well as a new solicitude for student health. The War Office emphasis on basic military training has led to a requirement of two years' medical military training for medical students. Postgraduate facilities have not been cut down, although many modifications have been made owing to reduced teaching staffs. Barriers of old requirements have been lifted for special students. More and more the tendency is to consider the aptitude of the individual student and give hitherto unheard of facilities in the way of intensive courses to useful men.

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*Drs. Frederick H. Falls, George H. Rezek and S. T. Benensohn, Surgery, Gynecology and Obstetrics, September, 1942, Vol. 75, pp. 289–299.

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Open Forum

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To the Editor.—

There is a critical need for medical and surgical supplies that may lie hidden and forgotten in your office: discarded or tarnished instruments, surplus drugs, vitamins, and infant foods. Collected, packaged, sent to the Medical and Surgical Relief Committee, they can play a vital rôle in its program of medical relief for the armed and civilian forces of the United Nations.

Surgical instruments and medicines are sought after by physicians and pharmacist's mates of our Navy—are hungrily snatched by the medical corps of our Allies. The work of war zone hospitals and welfare agencies is too often crippled by the lack of medical supplies. Community nurseries in this country and refugee camps abroad cry out for vitamins and baby foods for their ill-nourished charges.

In the pages of this journal you may have read about the committee. It has supplied over nine hundred subhunting and patrolling ships of the Navy with emergency medical kits; equipped battle-dressing stations on battleships, destroyers, and cruisers. The committee's roll-call of medical requests—not one of which has been turned away—reads like a world geography: the Fighting French in North Africa and Tahiti; the Royal Norwegians in Canada and Iceland; the West Indies; South and Central Africa; China; India; Great Britain; Yugoslavia; Greece; Syria; Russia; Alaska, and of course, the United States.

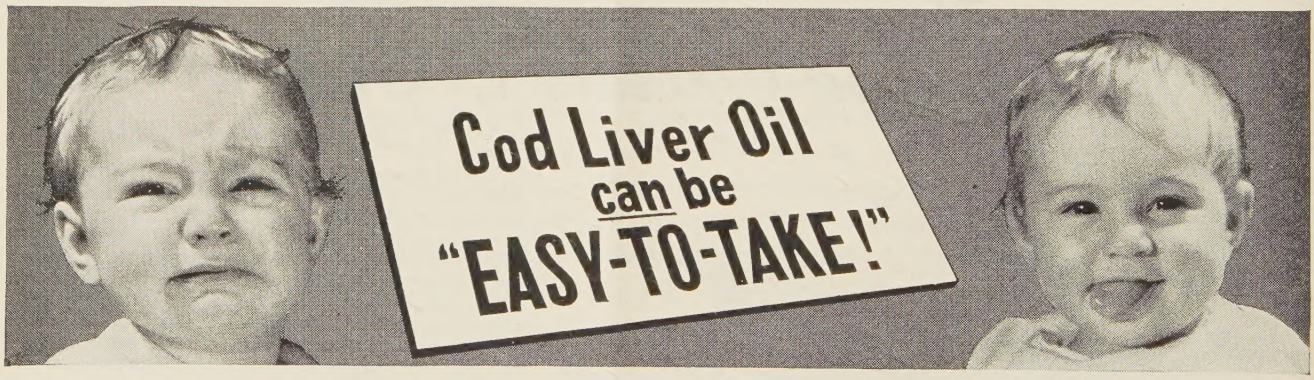
To meet the demands that pour into headquarters, the committee needs all types of instruments, especially clamps, scalpels, forceps, and all kinds of drugs from iodine to sulfa products. By contributing what you can spare, you will help speed another shipment of sorely-needed medical aid.

Joseph Peter Hoguet, M.D.
Medical Director

Russian War Surgery

A brief summary of the observations of R. Watson-Jones, a British surgeon recently returned from a medical mission to the U.S.S.R. (*Brit. Med. Jour.*, Aug. 28, 1943), again highlights the extraordinary work being done by Russian women. Front line hospitals have often been almost completed by nurses in the intervals of battle. Some such hospitals are buried six feet deep, are made of wood, and perfectly camouflaged by the surrounding forest. The reception-sorting ward has no equipment except collapsible stretchers; here washing and shaving are done as important first-aid measures, the patients examined and marked for urgency, treatment, and priority. They then go to special wards, each of which is equipped with its own x ray, wound-dressing and operating suite. Treatment by skilled specialists is instituted within ten or twenty miles of the front, and with twenty-four to forty-eight hours of wounding. Each ward has two hundred beds, the equivalent to a small hospital, which empties and refills every third or fourth day as patients are evacuated to the rear. This concentration of patients is made possible by the placing of stretchers in tiers. Watson-Jones comments that

(*Continued on page 8*)



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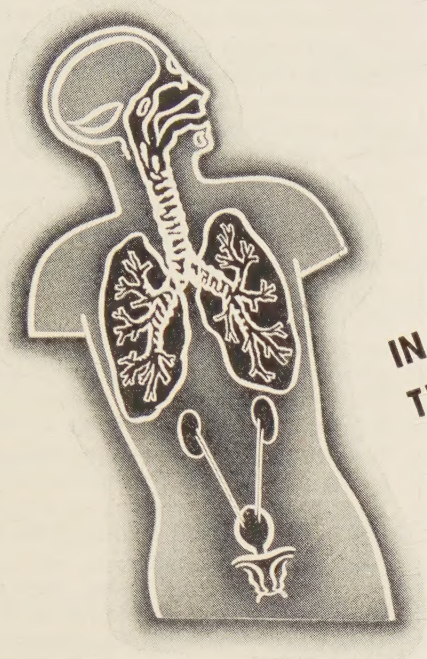

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such emergency hospital construction with its emphasis on active facilities rather than war design was most impressive in view of its adaptability to a varying flow of casualties, conservation of space, segregation and specialization. The segregation principle is carried beyond the specialist wards to specialist hospitals, of two to four thousand beds each, which are situated further behind the lines.

The closed plaster technique is used for all major wounds, compound fractures and joint injuries. Contrary to British technique, after wound incision no tube or drain is used and no gauze pack inserted; an unpadded plaster cast is applied directly over the wound. An essential difference of principle in the methods practised in Russia is that, according to their teachings, "a large excision of all injured and all contused tissues" is recommended, no matter how many hours or days have elapsed since wounding and "independently of the presence and degree of infection".

The author further reports: "A similar principle is adopted by many surgeons in the treatment of joint wounds; resection of the joint is preferred to arthrotomy in both early and late cases. In the hip-joint the head and neck of the femur is removed; in the knee-joint the resected bone varies from a thin sliver to a large section of the femoral condyles, but always including the joint capsule, without which drainage is considered inadequate. Sulfonamides are used and the limb is immobilized in plaster."

The main principles adopted in the treatment of craniocerebral wounds are: 1. In serious cases the patients are not to be operated upon until shock is controlled. 2. Operation is to be deferred until skilled surgeons and equipment are available, even if this necessitates a wait of two or three days; hemorrhage and rise of intracranial pressure are the only indications for operation on the spot—the longest period of deferment is three days; consequently specialist hospitals should be within three days' travel of the battle line, and travel by air for such patients should not be higher than five thousand meters. 3. Patients with craniocerebral wounds stand evacuation better before than after operation; when operation is performed the wounded man must stay where he is for fifteen to twenty days. 4. Contrast media are used in the diagnosis and location of cerebral abscess; excision with removal of the capsule is considered the treatment of choice.

The blood donor system of Moscow is highly praised. Donors are pre-tested and assembled in different rooms according to their blood groups There is a separate operating theater for each blood group. The work is done with skill and precision. Dried plasma is put up in small ampoules, connected by means of a rubber tube and clipped to a larger ampoule of sterile distilled water ready for immediate mixing and administration. Blood is flown to the front in thermostatic boxes with temperature control according to season. At the front hospitals the blood is stored in deep pits, and the temperature tested three times daily.

Astonishing progress has been made in many other phases of surgery. The author feels that Soviet surgeons would gain from visits to other countries, but equally that much is to be learned in Russia by surgeons from other countries. Specialization is excellent there; training of medical students is more thorough than in Britain; organization of surgical services is superb.

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Max Neuburger's Letters

SOLOMON R. KAGAN
Boston, Mass.

Letters Addressed to Dr. Solomon R. Kagan

(page 764, *December* 1943)

VIII

London, April 1, 1942

Dear Doctor Kagan:

Thanks for your letter of March 2d that I received this morning. I read with great interest your review of Freud's last work, and I am sure that the majority of the learned or educated people have shared the same or a similar opinion like yours. I think it was in the *Times Literary Supplement* where I found in 1941 a review in this sense and there it was said that this book has not at all enlarged his great reputation. The refusal of this Freud's book is, one can say, *unanimous*, therefore, you should not trouble with that matter. All the more you are always occupied with important work. Your energy and industry are indeed admirable. Sir Humphry Rolleston wrote me once on your amazing vigor which deserves acknowledgment and full appreciation...

With regard to your questions, I take the liberty of communicating to you that Sigmund Exner was an Aryan and a liberal thinker. Heinrich von Bamberger was an excellent diagnostician, professor of internal medicine, particularly an expert in heart diseases; he was a Jew by race, but has been baptized when a youngster in Prague and manifested antisemitic opinions very early...

Yours sincerely,
Neuburger

P. S.: Medical historians of Jewish descent were: Hirsch (baptized), Pagel, Bloch, Ebstein, Fischer, Hirschberg (the great oculist). Aryan historians were Baas, Haeser, Puschmann, Sudhoff, and Töply.

IX

London, April 28, 1942

Dear Dr. Kagan:

...As you know at my 70th birthday a "Festschrift" has been proposed by one of my friends in Vienna, Dr. Emanuel Berghoff, and about forty articles have been sent to him from colleagues and friends (British, American, German, French, Italian, etc.), but a publication was impossible because Dr. Berghoff left Vienna for Jugoslavia in the year of 1938, in the time of Nazism in Austria. My birthday on December 8, 1938 was indeed a very sad seventieth birthday.

Please write me as soon as possible.

Neuburger

X

London, May 5, 1942

Dear Doctor Kagan:

...I did not receive your article on Cyon[1] which you promised to send me. This nobleman was an excellent experimental research worker, living at first in Russia and afterward in Paris. His work was often quoted by my teacher of nervous diseases in Vienna, Professor M. Benedict.

In reply to your question, I inform you that the medical historian and diagnostician, Baas, was an Aryan, a descent of a noble family of hollandish origin (Low Country). He was a real democrat.

What is the matter with the second edition of your Life of Garrison?[2] I am very much interested in this book...

A pupil of mine was Alcalay, a Jew of Spanish descent, formerly chief rabbi at Belgrade (Jugoslavia). He and other students of this branch who graduated in Vienna, were sent to my lectures on Arabic medicine by David Heinrich Müller, professor of Arabic languages at the philosophical faculty.

Just today my new book, *British Medicine and the Vienna School* appeared. The book is illustrated (12 portraits and a picture of the famous Vienna General Hospital) and was published in London by William Heinemann.

Neuburger

[1]It refers to my article "Dr. Elie de Cyon" which was published in *Medical Leaves*, Chicago, vol. IV, 1941.

[2]The first edition—of *Life and Letters of Fielding H. Garrison* appeared in 1938. The publication of the second edition of the same book was postponed as a result of war conditions.

(*Continued on page* 12)

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XI

London, May 11, 1942

Dear Doctor Kagan:

Many thanks for the reprint of your most interesting article on de Cyon which reached me May 8th. I read it with the greatest interest. I didn't know anything concerning Cyon's connection with Pobedononszeff, Drummond, etc. It is indeed terrible that a man of such scientific reputation made slanderous statements of lowest kind...

Dr. Victor Robinson has done much for me, helping the publication of my articles on medico-historical subjects. Robinson was always a good friend of mine, and Garrison valued his work and favored him... Welch paid me once a visit in Vienna at my Institute of Medical History and asked me which books should be bought for the projected Institute in Baltimore.

My hobby was to show the development of the medical thought and the dependence of the medical methods upon the leading general cultural ideas in each historical period. And as a former neurologist, I have been nearly the only historian of the investigations of the neurological experiments. My first book, *The Historical Development of the Experimental Physiology of the Brain and Spinal Cord* (1897), is a proof of my aim...

Cordially yours,
Neuburger

XII

London, May 25, 1942

My dear Doctor Kagan:

Many thanks for your letter forwarded to me by my son from Buffalo. As I wrote you sometime ago, I received your work, *Leaders of Medicine* and read it with great interest and pleasure. I am sorry that I had to leave all my books in Vienna, among them also your books, *Jewish Contributions to Medicine in America* and *Life and Letters of Fielding H. Garrison.* It is a pity that I had to leave also a rich collection of letters sent to me during a period of about forty years, among them letters of nearly all medical historians... I am very glad to learn that you will publish a second edition, revised and enlarged, of your *Life and Letters of Garrison.* You may insert there some of my letters I had written to him. I have been a sincere admirer of Garrison... He and Sir William Osler have made my reputation in the U. S. and in Britain... Your vigor and industry is indeed marvelous. I think it is a very good idea to edit your medical album entitled *The Modern Medical World.*

Concerning my paper on Jewish Contributions to Medicine, I am emphasizing that it deals almost only with the German and Jewish physicians of the 19th and 20th centuries. Therefore, in translating this article into English, you should remark that the author limited the thesis in this sense. Besides that, some names, particularly of Vienna physicians, are not worthy to be mentioned.

Max Neuburger

XIII

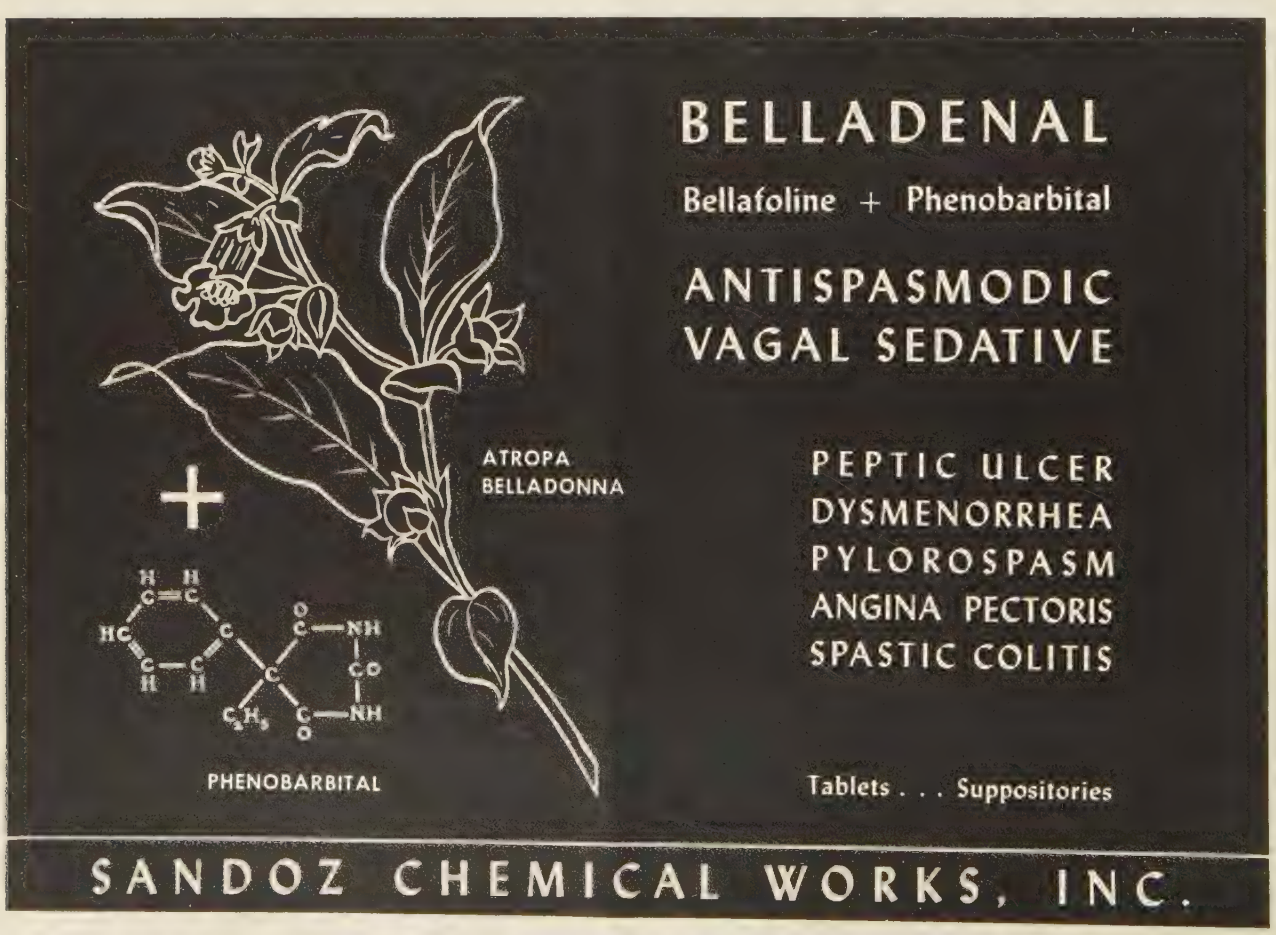
August 6, 1942

My dear Dr. Kagan:

Many thanks for your letter of June 20, by which I have been informed that you will finish the biography base on sufficient material.

With regard to the article concerning the contribution of the Jewish physicians I agree and consent with all your additional notes. A lecture never may give a complete history like a book and as a delegate of the Viennese group I was compelled to consider almost alone the Austrian and German investigators and practitioners. Therefore the important Jewish scientists were seldom mentioned. For instance, the excellent neurologist, Goldflam of Warschau, the pediatrician, Weill-Halle of Paris. With regard to the very few English professors of Jewish descent I mentioned Sir Felix Semon. Concerning Metchnikoff I knew his one sided descent, but I think he is not to be mentioned, because only the paternal descent is determining, in my opinion. Indeed one may remark that this great man, son of a Russian noble, never denied, but praised his Jewish descent on the side of his mother. With regard to the Russians, I think I mentioned Axenfeld, the neurologist, Cyon, but not Besredka and Weinberger. I should be very pleased to find these and other men mentioned at the end of my article or in your footnote. With regard to the Americans, please tell the readers that you have

(*Continued on page* 14)



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written a comprehensive work on this subject and quote the title of it.

I hope you will revise the English translation and correct some expressions, for instance the English terms for diseases (Flica Polonica, etc., etc.). Such corrections must be made before giving the manuscript to the printer.

The lecture was not delivered at Jerusalem, but at Tel Aviv because of the Arabic riot at that time, and the delegates couldn't go to Jerusalem before the end of the Congress, and then only as visitors of the Holy Town and its environs.

Yours very sincerely
Neuburger

Letters Addressed to Dr. Robert Rosenthal

I

Vienna, Nov. 1st, 1935

Dear Friend:

My heartiest thanks for your nice letter and your excellent present for my institute. In particular I enjoyed the photograph of your library! You are justified in being proud of your medico-historical collection of infant feeding vessels . . .

At the end of September I went to the 10th International Congress of Medical History in Madrid as delegate of the ministry and the medical faculty—but I had to pay all expenses myself . . . I had a wonderful time while I was there. I saw more interesting things than I had seen in all my life and met medico-historians or friends of the history of medicine from all over the world. It was a great triumph for me and I received the degree honoris causa with four others at the University Alcala with the rites of the 16th century! We were in Toledo, Alcala, Aranquez, Escorial, etc. You can imagine what I saw of art treasures! Every day excursions, banquets, etc.—a life like in paradise. I also brought home a whole library of Spanish medico-historical writings. The attendance was excellent; several hundred physicians with their company had come from England, North and South America, the Philippines, Japan, France, Belgium, Holland, Germany, etc. More than thirty countries had sent official delegates! I was a member of the honorary committees and often had to wear full dress and my medals during the introduction at the ministry to the president of the republic, and to the mayor of Madrid.

I shall write to you soon again and in the meantime my heartiest greetings in old friendship,

Your devoted Neuburger

II

Vienna, Nov. 1st, 1937

Dear Friend:

This year I was in Prague with the fourth International Congress of the History of the Exact Sciences and I also read a paper there. The summer was not a particularly good one; I had taken the cure at Gleichenberg, like the year before. From your last letter I could see how large and hard your field of work is, but there is no doubt that you will reap a success which could hardly be expected here. With the best regards to your wife.

Your devoted Neuburger

III

Vienna, June 14th, 1939

My dear friend:

I thank you very much for your kind letter of June 3rd, which I received this morning. As far as Ch. Singer and Sir D'Arcy Power are concerned, I have been directly in touch with them and heard good news for the near future.

In the meantime I have been elected an Honorary Member of the Royal Society of Medicine (London). I know that I do not deserve this honor but I consider it the crowning point of my life . . .

I shall write you as soon as possible again.

Neuburger

IV

London, Oct. 1939

Dear Friend:

I received you air mail letter of Sept. 9th, after great delay, on Oct. 3rd. Many thanks for your friendly message which gave me very great pleasure.

It is now six weeks that I have been here and I work daily for six hours at the Wellcome Historical Museum where after a few months I shall have to make a report on

(*Continued on page 20*)

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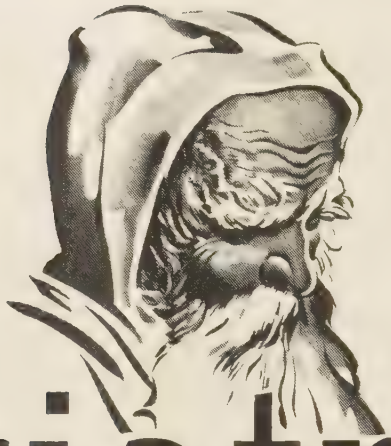

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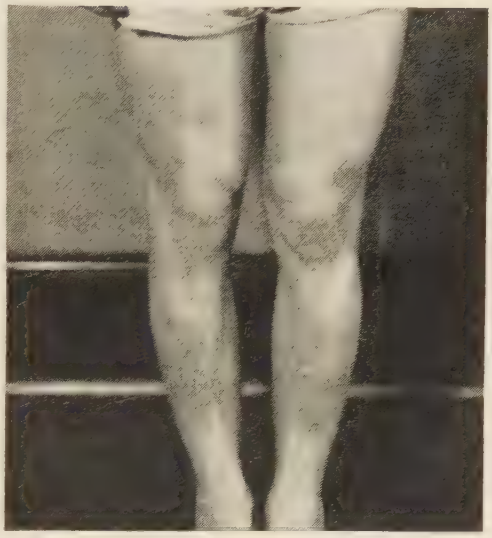

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*Editorial N. Y. State J. Med., 42:2292 (December 15), 1942

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HYPERTENSION—
Country or City Bred?

Of particular interest to doctors in urban centers is the rising incidence of hypertension in such communities. The urban population has a cardiovascular-renal mortality rate that is 40% greater than among the rural population. This is of special importance in the present war effort, since considerable numbers from rural communities have been moving into industrial centers.

Of the chronic diseases prevalent in industrial communities, the cardiovascular-renal group has been reported to be the most seriously disabling.[1] This is particularly significant at present, since a greater productive responsibility is being assumed by the more advanced in age. The high incidence of this group of chronic diseases among women of the ages 20-34 is also important in this connection.[2]

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1. J.A.M.A., 108:1876, May 29, 1937.
2. Public Health Reports, 56:2071, Oct. 24, 1941.

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the enormous library (over 200,000 volumes and many—to a large extent not catalogued—manuscripts). I was received in the most cordial manner and have an office to myself... In the evenings the lonesomeness makes itself very noticeable. I have not been able to get any news from Vienna since my departure (with the last aeroplane!). Not until yesterday I received a few lines through a friend in Ragusa... All my savings in my bank account were "frozen"... The securities ... are worthless. I arrived in London on August 26th at 9:00 P.M. literally penniless.

Cordially yours,
Neuburger

V

Jan. 23rd, 1940

My dear friend:

...As you probably heard from my son, I am in a hospital since December 19th for an operation. On the 20th he did... a preparatory operation... After three weeks I developed a bronchitis... and now... the operation cannot be performed until the warm season.

Your thankful and devoted
Neuburger

VI

London, March 29th, 1940

My dear friend:

You took such genuine interest in my fate that I can be convinced that the news of the excellent result of the radical operation on February 29th will be welcome to you; it was performed by Dr. S. I. Levy, F.R.C.S. On March 26th I was discharged from the hospital. Because I had to be in bed for six weeks I had to learn to walk like a little child, and even now I can walk only very slowly... but I am improving from day to day.

Your grateful
Neuburger

VII

October 1940

Dear Doctor Rosenthal:

...I am sure you know all from the newspapers, therefore it is needless to say under what conditions I am living. I have had to change my lodgings twice because of the bombardment... I am feeling my loneliness more and more...

With heartiest greetings,

Very sincerely yours,
Neuburger

VIII

London, Dec. 28th, 1940

Dear Dr. Rosenthal:

I received your kind letter of Dec. 7th and... the birthday gift... During the last months I worked very hard, because I would like to publish a paper or booklet on the subect of British Medicine and the Medical School of Vienna: connections and parallels. I think this publication might prove to my friends... that my vigor is not exhausted though I have reached the age of 72. It would be a modest sign of the gratitude I owe to the British hospitality. As you know much from the newspapers you can imagine the unpleasantness of life.

With all good wishes for a happier time,

Very sincerely yours,
Neuburger

Catalogue of Technical Books

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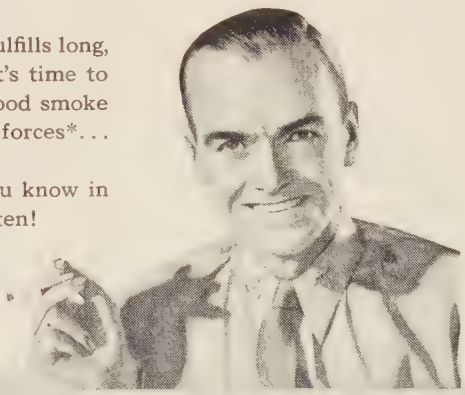

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New reprint available on cigarette research—Archives of Otolaryngology, March, 1943, pp. 404-410. Camel Cigarettes, Medical Relations Division, One Pershing Square, New York 17, N. Y.

Magnetism in Medicine in Early Canada

An account of the practice of magnetism in medicine in Quebec in the early part of the last century, which medical men—at least in Canada—will find interesting, is given in a recent number of *Le Bulletin des Réscherches Historiques,* the official organ of the Bureau of Archives of the Province of Quebec. This story, I translate from the French, as accurately as the respective idioms of the two languages permit.

"Magnetism was very much in vogue in Quebec in 1838 and for some years later. Some professional magnetizers had given public exhibitions at Quebec in the first quarter of the nineteenth century, but we believe that it was Edward Gibbon Wakefield, who came to Quebec in 1838, in the capacity of adviser to the Governor, Lord Durham, who made magnetism popular. Mr. Wakefield was only an amateur, but he had great success—it was especially in English circles that he exercised his science. Nevertheless, he had several pupils among the professional French Canadians, and they in their turn introduced magnetism into their families. Dr. Worthington tells us that Wakefield, during his residence in Quebec, eagerly sought the society of medical men. Worthington himself, being a medical student, assisted in operations performed by Sir John Durat, one of Durham's suite, upon patients who had first been magnetized by Wakefield. The medical men of Quebec, nevertheless, were not enthusiastic over the experiments of Wakefield, and magnetized operations were soon abandoned."

Hon. William Renwick Riddell
Toronto, Canada.

Our Contributors

William Seaman Bainbridge, A.M., M.D., Sc.D., C.M., LL.D., Litt.D., F.I.C.S., New York, N. Y., Captain, Medical Director, U.S.N.R., was graduated in medicine from Columbia University and did postgraduate work at the College of Physicians and Surgeons, the Presbyterian and Sloane Hospitals, and at European hospitals and clinics. He has received the following honorary degrees: A.M. from Shurtleff College, Illinois; M.S., from Washington and Jefferson College; Sc.D. from the University of Pittsburgh; C.M. from National University, St. Louis; LL.D. and Litt.D. from Lincoln Memorial University; LL.D. from Coe College, and M.D. from the oldest university in this hemisphere, San Marcos of Peru.

Dr. Bainbridge has made extensive contributions to the literature of medicine, one of the most important of which is his book, *The Cancer Problem,* with translations into the French, Spanish, Italian, Polish and Arabic languages. He is a member of numerous medical organizations, national and international. He was the official representative from the United States to the International Congresses of Military Medicine, Surgery and Pharmacy, and to the Congress of the Royal Institute of Public Health held in Zurich, Switzerland.

He has recently returned from an official mission for the U. S. Government to all the Central and South American Republics, the important islands of the Caribbean, and the United States bases in this area. His reports on his observations and recommendations are lodged with the Department of State, the Army and Navy Medical Service, and the Public Health Service.

* * *

Abr. L. Wolbarst, M.D., New York, N. Y., was graduated from the College of Physicians and Surgeons, Columbia University, in 1898, and soon thereafter began to specialize in urology, with particular emphasis on the sexual and venereal diseases. He has written two books, *Gonococcal Infection in the Male* and *Healthy Sex Life,* has tranlated and edited books on urology from the French and German, and has written several hundred medical editorials and articles. He has been consulting urologist to the Central Islip and Manhattan State Hospitals, Beth Israel and Jewish Memorial Hospitals. He is a director of the American Euthanasia Society and a member of the New York Musicians Society (The Bohemians). His hobbies are varied. He was awarded first prize for sculpture at the 1940 exhibit of the American Physicians' Art Association in New York. Concerning recreation, he does not play golf, but enjoys fishing and chess.

* * *

Halley H. Friederwitzer, M.D., New York, N. Y., was graduated from New York Medical College, Flower and Fifth Avenue Hospitals, in 1929. He is adjunct surgeon and chief of the surgical clinic at Beth David Hospital, New York; associate surgeon at New Amsterdam Hospital; and demonstrator of anatomy and surgery at New York Medical College, Flower and Fifth Avenue Hospitals. Dr. Friederwitzer is doing research work in ultrashort wave effects through different media, and is experimenting with new surgical procedures which are based on a true knowledge of anatomy and physiology. His pastimes are medicoengineering, sports and good reading.

* * *

Herman Goodman, M.D., New York, N. Y., was graduated from the College of Physicians and Surgeons, Columbia University, in 1917. He served with the U.S. Army during the World War. His interests have ranged from dermatological diagnosis, physiotherapy, particularly ultraviolet radiation in skin diseases, the pharmacy of prescription writing in cutaneous physiology and pathology. He is a dermatologist and has contributed many articles to this and other journals on topics relating to his specialty.

* * *

Zikmund Winter, M.D., New York, N. Y., was graduated from the Charles University of Prague in 1925. He went to London in 1939 where he assisted in the research work of wide field x ray therapy at the Charterhouse Rheumatism Clinic. Later he became honorary physician to this clinic. He came to the United States in 1943 where he is in private practice. Chess is one of his hobbies.

* * *

Paul E. Gordon, M.D., Philadelphia, Pa., was graduated in medicine from Temple University School of the Medical Society of the State of Pennsylvania and various local societies, and is a Fellow of the American Medical Association.

* * *

James A. Bernardin, M.D., Philadelphia, Pa., received his degree in medicine from Hahnemann Medical College and Hospital of Philadelphia in 1937.

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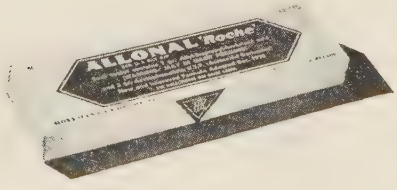

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VOL. 157, No. 1 JANUARY 1944 WHOLE No. 2732

THE USE OF ALLANTOIN-SULFANILAMIDE OINTMENT IN SKIN INFECTIONS

PAUL E. GORDON and JAMES A. BERNARDIN

Philadelphia, Pa.

Although the oral use of the sulfonamides dates back to 1935 (Domagk, 1), their application locally did not receive much attention until the last two years. The majority of the literature on the local use of the sulfonamides is found in either 1942 or 1943. One of the first papers on the use of a sulfonamide from the viewpoint of application to the skin alone is that by Veal and Klepser (2), who used a sulfanilamide-allantoin ointment[1] for the preparation of superficial wounds in skin grafting in 1941.

Miller (3) used sulfanilamide and sulfathiazole in various concentrations varying from five to fifty percent in a series of 115 patients and obtained cures in all cases of superficial pyogenic infections. The cure of deeper infections took longer and seemed to depend upon the ability of the drug to reach the infection. He recommended that either a five percent sulfanilamide or sulfathiazole ointment be used.

Further attention was drawn to the use of sulfonamides for dermatological conditions by the papers of Zondek et al (4), of Hurwitz and Prien (5), and of Brunsting (6).

Zondek (4) and his associates found that sulfanilamide applied percutaneously was absorbed through the skin of rabbits and men and suggested, therefore, that this use of sulfanilamide might serve as an auxiliary method of chemotherapeutic treatment in certain cases.

Hurwitz and Prien (5) treated an infection due to hemolytic streptococcus of the microaerophilic type successfully with sulfanilamide after failure with zinc peroxide.

Brunsting (6) devoted his paper to the discussion of the use of sulfonamides in the treatment of erysipelas, cellulitis, extensive chancroid and other skin diseases.

Composition of the Ointment, Its Absorption and Toxicity

While powdered sulfanilamide has been used as either a preventive or a curative agent on operative wounds, this form of application is not suitable for the treatment of dermatological conditions. There is no question that the form in which the sulfanilamide is supplied and the carrying agent in which it is dispersed are of unique importance, so far as the absorption and consequent efficiency of the therapy is concerned.

Strakosch et al (7) incorporated sodium sulfathiazole into thirteen different ointment bases and felt that its bacteriostatic power was not lost when tested by the inhibition of growth of Staphylococcus aureus and beta-hemolytic streptococci on blood agar plates. These investigators found that the sodium sulfathiazole was most rapidly effective when incorporated in bases of a water-in-oil type emulsion, which are rich in cholesterol.

Later, Strakosch (8) tested the relative intensity of penetration into the normal skin of various substances and found the order from the best to the worst penetration to be as follows: the base consisting of liquid petrolatum-peanut oil-stearic acid-triethanolamine-cetyl alcohol and water; "hydrosorb"; "aquaphor"; lard; cod liver oil; stearyl alcohol-mineral oil-water-petrolatum; lanolin; a base consisting of mannide mono-oleate-ceresin wax-petrolatum-mineral-oil-lanolin; lecithin ointment; petrolatum and lanolin in equal parts; petrolatum plus five percent cetyl alcohol; olive oil; rose water ointment; vaseline, and finally petrolatum as such. He found that the pH of the skin and of the various bases was also a factor in penetration.

There is another important point which too frequently is disregarded when thinking of the various sulfonamides and their action, either locally or generally; that factor is their solubility. Given an intact skin, it may well be that various ointments differ considerably in their penetrative values, but when the skin is denuded, as is so frequently the case in various dermatological conditions, the normal barrier of skin is no longer present and there is ready penetration. The main factor then becomes the solubility of the particular sulfonamide in the body fluids.

In this connection, Graves (9) has found that sulfanilamide goes into the solution very quickly in strong concentrations, approximately 1500 mg. per hundred cc. It is absorbed quickly and its presence in the blood stream can be shown within two hours' time. It reaches its maximum value in the blood stream during the eight to fourteen hour period, but is almost completely absent after sixty hours. Sulfathiazole, on the other

[1]The sulfanilamide-allantoin ointment used is manufactured under the name of "Allantomide" by The National Drug Company, Philadelphia, Pa. It contains ten percent sulfanilamide and two percent allantoin in a water-miscible greaseless base.

hand, gives a maximum concentration of approximately 180 mg. per hundred cc. in the wound.

Fuller et al (10), in a test similar to that of Strakosch (8), tested the absorption of sulfanilamide in various media when applied locally and found that an oily base or a water-in-oil emulsion much delayed the absorption of the sulfonamide. They also observed that the incorporation of glycerin or a wetting agent caused little or no influence on the rate of absorption. When used in the tissues as a compact mass, so that the surface/volume ratio was low, the absorption of sulfanilamide was much delayed by its incorporation in an oil-in-water emulsion, but with a glycerin preparation, rapid absorption occurred.

It is because of these reasons that allantomide base is prepared without the use of oil. The base is water-miscible and contains glycerin, stearic acid, triethanolamine and water. The triethanolamine acts as a surface tension reducer and allows the absorption of the sulfanilamide to better advantage.

Into this base ten percent sulfanilamide and two per cent allantoin are incorporated. Allantoin has a long and interesting history in regard to its action on tissues. In 1912, C. J. Macalister (11) had extracts of the comfrey root analyzed and found that they contained a relatively high percentage of allantoin. He used both the crude extracts and solutions of pure allantoin to treat chronic ulcers that had failed to respond to other treatment and was convinced of their efficacy.

Comfrey (Symphytum officinale, woundwort), a common weed, has been used in rural England since Saxon times as a specific for wound healing. Allantoin has been known since 1821 when it was isolated from the allantoic fluid of cows. It occurs in many plants and, being an end-product of purine metabolism, is a normal constituent of the urine of all mammals.

It has long been known that maggot infestation is beneficial in promoting healing of severe wounds. In 1935, Robinson (12) showed that the active principle of maggots is allantoin and suggested that allantoin owed its healing action to its ability to break down and form urea. Urea had earlier been shown to assist in wound healing. Ramsden (13) demonstrated that protein dissolved in strong solutions of urea and that weaker solutions hastened the action of proteolytic enzymes. Robinson (12) concluded his article by stating: "Allantoin, a constituent of the urinary secretions of surgical maggots and of common occurrence in plants and animals, has been found to stimulate healing, with abundant growth of healthy granulation tissue in slowly healing suppurative wounds. The excretion of this substance into the wound is doubtless one of the factors contributing to the remarkable healing effects obtained in maggot therapy."

Greenbaum (14) compared allantoin, allantoin dipiperazine and urea and found that of these three proliferative substances, tested on the skin of roosters, allantoin possessed the greatest healing action and urea the least.

Allantoin not only stimulates the proliferation of granulation of tissue, but it acts also against sulfonamide inhibitors. It had been known that the sulfonamides at times lost their bacteriostatic action. Tsuchiya et al (15) demonstrated that urea prevented the inhibitory action of para-aminobenzoic acid on sulfathiazole. This work was confirmed in a later paper (16).

It must be remembered that allantoin contains the urea radical which explains its ability to dissolve necrotic proteins and to prevent the action of the sulfonamide inhibitors, while at the same time producing stimulation of cell growth.

Some fear has been expressed that general reactions might occur from the local use of sulfanilamide ointment. This question is best answered by the work of Hodgson and Robinson (17), who applied sulfanilamide powder locally in forty-one cases of traumatic and surgical wounds. The estimation of blood sulfanilamide was made by the method of Werner (18). The concentration of the drug in the blood was usually of the order of one mg. per 100 cc. for each gram of sulfanilamide deposited in the wound. It can be seen that allantomide, containing ten percent sulfanilamide, does not offer the drug in sufficient quantity to cause absorption to the extent that general reaction might follow.

Veal and Klepser (2) found that, in their series of patients, the blood sulfanilamide never exceeded one mg. percent.

Occasionally complaints are made by dermatologists concerning the local use of the sulfonamides. Their objections fall within two groups; first, that the local use of the sulfonamides will sensitize the patient so that oral use later may bring forth profound reactions, and second, that local hypersensitivity may develop. These questions are answered by the report of the Council on Pharmacy and Chemistry, of the American Medical Association, by Cole (19). This article, which is concerned purely with the local use of sulfonamide compounds in dermatology, summarizes the matter of local application thus: "In the light of present data, sulfonamides should not be administered locally for more than five days because of the danger of sensitizing the patient and perhaps later precluding internal sulfonamide therapy where the situation may involve a far graver disease, e.g., a pneumonia or a bacteremia."

The decision to limit the local use of the sulfonamides to five days is somewhat arbitrary and is based on insufficient literature. When one considers that this year there will be approximately six thousand tons of sulfonamides manufactured for medicinal use and that a great deal of this will be used locally either on the battlefields or in private practice, it is difficult to imagine how any arbitrary figure might be set for the safe period of application locally. There must be thousands of cases in the United States in which a sulfonamide compound has been used locally without any subsequent sensitization. Suffice it to say that the possibility of sensitization to a sulfonamide after local application may be more theoretical than practical.

Selection of Cases

In this project a group of psychiatric patients with unselected skin infections was treated with allantomide ointment to determine the efficiency of the therapy in the reduction of treatment time and in the cure of various skin conditions. No contraindications were considered and the only specification requested was that the infected area be free of purulent material at the time of application of the ointment. In all, two hundred and fifty patients were treated with the ointment.

The following types of cases were treated during this study: 1, Indolent leg ulcers; 2, carbuncles and furuncles; 3, ecthyma following infestation by scabies and pediculi; 4, decubitus ulcers; 5, dermatoses due to incontinence of urine and feces; 6, infected lacerations.

1. *Indolent leg ulcers.*—One hundred and fifty cases of indolent leg ulcers were treated. The method of application varied somewhat according to the location of the ulcer, whether the patient was bedridden or ambulatory, and the nature of the mental illness. Sixty-six patients who had had ulcers for from two weeks to one year recovered completely, leaving only a soft, fine scar as the residuum. Fifty-eight cases showed considerable improvement in that the purulent discharge ceased and a healthy granulating base was established; epithelial margins began to advance over the surface of the ulcer. Fifteen cases showed moderate improvement in that granulations appeared even though some purulent discharge was still present. Eleven cases failed to show any response whatsoever.

For ambulatory cooperative patients, the ointment was applied in the following way: After a thorough cleansing of the ulcer surface with soap and water, allantomide was liberally applied to the ulcer and surrounding tissues and then covered with several layers of gauze. In the case of uncooperative or bed-patients, the ointment was applied as stated above, but the bandage was kept firmly in place by means of extensive adhesive strapping so that patients could not remove the dressing. Nevertheless, in spite of this precaution, several patients removed their bandages and continually reinfected their ulcers.

2. *Carbuncles and furuncles.*—Thirty-five cases of carbuncles and furuncles were treated first by incision and drainage and then by the use of allantomide ointment packs. Immediately following the incision of the carbuncle or furuncle, sterile gauze which had been soaked in alcohol was packed into the area for twenty-four hours. Thereafter, the wound was packed with allantomide ointment and the entire area covered with sterile gauze.

Of the thirty-five patients so treated, thirty-three healed entirely and the two that failed to show response were patients who were uncooperative and persisted in removing their dressings. These patients developed spreading cellulitis about the carbuncle or furuncle and were treated by the peroral administration of sulfathiazole.

3. *Ecthyma following infestation by scabies and pediculi.*—Forty patients were treated for ecthyma which was the result of extensive infestation by scabies in thirty-two cases and louse infestation in eight cases. The patients' bodies were first thoroughly scrubbed with soap and hot water and then rubbed with sulphur ointment repeated for three successive days to destroy the parasites. Following this, allantomide ointment was rubbed thoroughly into all areas which showed an ecthymic eruption. All these patients showed rapid and favorable response so long as they were kept in isolation.

4. *Decubitus ulcers.*—Fifteen patients with decubitus ulcers were treated with allantomide ointment. The method of application was first to cleanse the ulcers thoroughly with a solution of green soap and water and then to pack the entire ulcer area with allantomide ointment over which thick pads of gauze were placed. The patients were then placed upon rubber "doughnuts" so that no pressure was present at the site of the ulcer. Of fifteen patients so treated, all showed gratifying response. In six cases the ulcers healed entirely after an average of one month's treatment. Four patients died of intercurrent infections during the course of treatment, but in these cases necrosis had disappeared and granulations had appeared in the ulcerated areas. The remaining five patients showed considerable granulation on the base of the ulcers where the necrotic process had been.

5. *Dermatoses due to incontinence of urine and feces.*—Six bedridden patients, with incontinence of urine and feces, were treated for extensive pustular dermatosis of the back, the result of almost constant contact with excreta. Allantomide ointment was massaged into the infected areas and the patients were put in wheel-chairs to avoid further irritation of the infected areas by excreta. All six of these patients under this form of treatment recovered from the dermatosis.

6. *Infected laceration.*—Four patients with infected lacerations were treated with allantomide ointment in the following manner: The incisions were first cleansed carefully with a solution of green soap and water and then allantomide ointment was packed into the depths of the laceration; dressings were then applied. Three patients showed rapid healing of the wounds while the fourth showed little or no improvement. This was due to the fact that the patient continually removed his dressings and rubbed filth into the laceration.

No attempt was made to classify the cases treated according to their bacteriological cause. Patients were watched daily for any evidence of sulfanilamide intoxication. No such evidence was noted. Failures in the course of treatment were most likely due to the fact that patients were uncooperative and refused to keep the dressings in place.

Conclusions

Two hundred and fifty patients, presenting a variety of infections of the skin ranging from simple pustular eczema to decubitus ulcers, were treated for a period of one month with allantomide ointment.

It was found that a favorable response was obtained in most cases, sixty-two percent, improvement in thirty-one percent, and failure in seven percent. The failures were due usually to lack of cooperation on the part of the patients. Four patients died during the course of study, but they had already begun to show signs of improvement under the regime of treatment.

It is felt that allantomide ointment is of definite value in the treatment of chronic pyogenic infections of the skin.

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FROM THE GROUND UP*

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A sound body and mind are man's best foundation for loftiness of thought and purpose. Proper sanitation, the intake of adequate food and drink, clean thinking and living, and exercise, all play their rôle toward this end.

The socalled civilized people need to revert to certain simple customs of those considered less favored and more backward than we are, if we are to receive the advantage of some of their primitive habits that make for healthy bodies. During a recent mission for my government to the Central and South American Republics, and the larger islands of the Caribbean Sea, I was afforded an opportunity to observe life among some tribes largely unaffected by contact with white men. As a physician and surgeon my natural interest lay along the line of health and hygiene. Lack of sanitation is one of their great problems, and is the cause of most of the endemic diseases. However, to my surprise, I found that the majority of Indians of these countries, living among themselves without any dental care or oral hygiene, had unusually fine teeth and red healthy gums. These Indians live in the open, are bathed in sunlight most of the day, eat many oranges, bananas, avocados, mangoes, etc., use limes and limewater in their cooking, and consume whole grain and whole rice. It would appear, then, why they are saved from certain deficiency diseases with which we are all too familiar. Back in the days of the ancient Aztec Indians, the diet of their pregnant women was very carefully regulated, and both the Aztecs and the Mayas stressed the importance of the physical training of children.

In India, China, Japan, the Philippines, the Malay Peninsula and Archipelago, millions of people have as their sole diet fish and rice. If the miller did not polish the bran off the rice in these regions there would be no cases of beriberi, one of the better-known deficiency diseases, which has such ghastly consequences.

Vilhjalmur Stefansson, the great explorer of the Arctic, lived on a meat and boiled fish diet (including rotten fish) and cold water for several years, living, as he put it, "as an Eskimo among Eskimos". His health was excellent. In 1936, with reference to scurvy, he wrote: "... We had better emphasize that there has recently been such progress in the extraction, concentration and storage of vitamin C that it is now possible to carry with you enough to last several years, and of such quality that it will not deteriorate to the point of uselessness. But why carry coals to Newcastle? If you are in the tropic, pick a fruit or a green. If you are at sea, throw a line outboard and catch a fish; if you are in the Antarctic, use seals and penguins; if in the Arctic, hunt polar bears and seals, caribou, and the rest of the numerous game. True enough, if you make a journey inland ... where there is no game ... you have to carry food with you. In that case you might as well take lemon juice or some dependable extract".

In his examination of skulls of Eskimos who died before the Europeans arrived, Stefansson found "not a sign of tooth decay ... among that one of all peoples which most completely avoids the foods, the precepts, and the practices favored for dental health ..."

I am not advocating an Eskimo diet, but it is my firm belief that if we eat the proper kinds of foods daily, the need of various prepared vitamins, the absorption of which is inferior to that from natural food sources, will be lacking, as well as the possible hazards resulting from their prolonged, excessive use. Of course, when the digestive functions of the body are so impaired that they cannot properly assimilate the food consumed, or where there is a definite condition calling for added vitamins, or where disease has caused certain body mineral deficiency, or when it is impossible to secure the proper kind, quality and quantity

(*Continued on page 42*)

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Symposium on Neuropsychiatry

PSYCHOTHERAPY IN UROLOGY*

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When I accepted your kind invitation to read a paper on psychotherapy, I realized how Daniel must have felt when he was thrown in among the lions. May I say, however, that it is not my purpose to tell this body of psychologists and psychiatrists what methods they should adopt in applying psychology in urologic conditions. That would be as presumptuous as a psychiatrist attempting to tell a meeting of urologists how and when to use a cystoscope or how to deal with a kidney stone. My purpose is to indicate from personal experience under what circumstances psychotherapy can be of assistance to the urologist and to offer a few suggestions regarding therapy which I have found useful. I am sure some or all of the experts present will disagree in part or altogether with these suggestions, but they have served me well for many years and that is reason enough for mentioning them.

Urology, by definition, concerns itself as a specialty with the urinary and sexual functions in the male and with the urinary function alone, in the female. The urologist is frequently called upon to deal with conditions which are best treated with psychotherapy either alone or in association with routine urologic methods. The differential diagnosis between the definitely urologic conditions which require urologic therapy and the neurotic or psychic conditions in which psychotherapy is indicated is not difficult, as a rule, but there are borderline cases which often tax the skill of the urologist to its utmost. To deal with these cases properly, the urologist should know something of psychology and the psychologist something of urology; otherwise failure and even serious consequences may result.

The urologic conditions which may be benefitted by psychotherapy may make themselves manifest by various phenomena at different age levels, from childhood to old age. In children, autoeroticism or masturbation and enuresis are the principal conditions we have to consider. They may occur as normal phases of early development or they may be the outward manifestation of a disturbed nervous mechanism. In the latter type, psychotherapy may be employed to great advantage. In the average normal child, while sex preoccupation certainly gives him pleasure, it presents no problems and remains quiescent after a time until it emerges again as a resurgent force with the advent of puberty. After the fourth or fifth year when the practice is apt to be most marked, the vast majority of children discard it; and even those who occasionally resort to it after puberty need not necessarily be considered abnormal. As far back as the Middle Ages, masturbation, because of the Biblical incident of Onan, was regarded as a mortal sin and the greatest of all sexual evils; it was associated with the most terrible consequences—principally insanity in this world and purgatory in the world to come. This association of masturbation with insanity still persists to some extent even among physicians, who do not recognize the fact that the excessive masturbation of the weakminded and the insane is rather the result than the cause of their mental disability.

Psychologists ascribe many factors as the underlying cause of persistent masturbation in growing children and they are usually of a psychopathic or neurotic character. From the urologic point of view, however, a common cause is a tight foreskin which induces a local irritation relieved momentarily by manipulation. In these cases circumcision removes the source of the irritation, and unless there is a neurotic disturbance as a background a complete cure is effected. It is important before circumcision is done, to make certain that the irritation is caused by the tight foreskin and not by the constant manipulation, for that will determine whether or not circumcision is indicated. While it is highly desirable as a hygienic measure that all male infants be circumcised shortly after birth, it may be harmful psychologically at three or four years to concentrate attention on the genitals by the more or less painful and (to the child) alarming operative procedure. It may act as a psychic trauma which may leave a disastrous effect on the sexual function in maturity. The same may be said of local treatment of the genitals in female children for a vaginal discharge which may be of innocuous origin.

The problem of masturbation in children is one which involves the attitude of the parents or guardians as much as the child itself, perhaps more, especially if they are what is known as "problem parents". The fear that the child is doing something that may lead to insanity is not an unusual one; it must be overcome by a sensible interpretation of what the child is doing and why. They should be told that the practice will probably be discarded as the child grows older and finds pleasure in some other form of mental or physical diversion. If the child suffers from phobias and finds an outlet for his anxiety in autoeroticism, parents should be induced to eliminate any domestic conditions which may tend to excite or frighten the child.

Constant care should be observed to the end that the child's nurse or guardian does not practice appeasement by manipulation of the child's genitals—a practice said to be not uncommon. The child should not be worried or frightened by threats of punishment but sympathetically led away from any fears or compulsions which may have developed. Difficult cases which do not respond to the unskilled psychotherapy

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of the urologist or the family physician should of course, be referred to the expert psychologist.

What has just been said refers with equal force to the problem of enuresis. The normal child should have a dry bed at two or three years of age. Unless there is definite evidence of organic pathology or anatomical defect, persistent enuresis after this age may be considered either as a conduct disorder due to faulty training or as a manifestation of a hypersensitive nervous system. Enuresis, like masturbation and constipation, may become a fixed habit if it is not corrected in the child's early years.

We must differentiate between nocturnal enuresis, which is common, and incontinence, which is rare in children and is caused by some anatomical defect or neurogenic dysfunction which brings about a constant dribbling. It need not be emphasized that psychotherapy has no place whatever in this condition. In the functional cases, however, psychotherapy should be directed both to the child and the parents and the methods are identical with those mentioned in connection with masturbation. While the physician should make every effort to find any possible physical or organic cause of the trouble, he should avoid, so far as he can, long continued and painful treatments and instrumental and surgical procedures at this time, such as cystoscopy, tonsillectomy, circumcision, etc. Such measures may do permanent psychic damage, difficult to repair.

Kindness and sympathy will do much to establish normal bladder control, while anger and threats will only retard it. The child requires and should be given that feeling of security and protection which all children (and adults as well) so urgently need in times of stress and trouble. Parents should be told that occasional bed-wetting, even in an older child, is fairly normal under certain circumstances and not necessarily of pathological origin. All elements in the home life which may be responsible for the child's hypersensitivity should be eliminated. Obviously cystitis and similar organic conditions which induce vesical irritation with consequent enuresis will not respond to psychotherapy.

At puberty the sexual function assumes the major interest of psychotherapy. Puberty may be regarded as a rebirth of sexuality, different and more powerful than the infantile type, yet retaining many of its patterns. Certain problems arise which require psychotherapy. With the prevailing lack of proper sex education, the average boy or girl approaches and passes the stage of puberty more or less confused as to its meaning and significance. The rather sudden change from childhood to adolescence comes to many as a psychic trauma. They go through a period of stress and storm which may leave its impress on the psyche for years to come. It is in these cases that emotional conflicts and crises arise which require adjustment, for which purpose psychotherapy is indispensable.

In the boy, the changes are more marked than in the girl; they often are of a violent and explosive character associated with a more or less serious emotional upset. The boy's entire emotional nature may change. A recent writer (1) speaking of Schumann, the composer, says: "The first change to be observed in this strange man's development occurred as he passed his fifteenth year. Whereas he had always been frank and gay and carefree, he now became melancholy, instrospective, indifferent, otiose, taciturn, manifesting a 'curious outward passivity' ". If the environment is discordant and unhealthy the boy may become antisocial, he may run away from home, and may even join a gang and run afoul of the law. The young gangster often is only a simple-minded youth, badly trained, parading his new powers before his admiring friends (2). Psychotherapy properly administered at this time can accomplish a great deal toward making him a decent member of society; and it might have averted the tragic years of despair and suffering in the adult life of Schumann.

Excessive masturbation in adolescence, practised for pleasure or as a habit is often associated with a state of mental instability which may require psychiatric attention. The habit may continue into later life and though it may do no harm it may subject the individual to ridicule, if not to something worse. There are many such individuals especially among exhibitionists. At college, one of my instructors, a brilliant man of fifty, constantly manipulated his genitals while lecturing. His students gave expression to the profound judgment that he was unable to use his brain unless his hands were working in his trousers at the same time.

From the urologic viewpoint, persistent masturbation is regarded as the result of some local irritation in the genital organs. As in the child, a tight foreskin with an accumulation of secretions is a commonly observed cause of local irritation at puberty and in adolescence; at this age there is no psychic contraindication to circumcision. In a personally observed instance, a boy of seventeen was about to be committed to a mental institution because of constant genital manipulation and failure in his school work, both of which he ascribed to a constant local irritation. None of the psychologists who were ready to commit him took the trouble to examine the genitals, but it was the first thing I did when he came under my observation. I found seventeen small stones imbedded in a thick foul secretion in the preputial cavity. He was not committed. Circumcision, with the removal of the stones, resulted in an immediate cure of his masturbation and complete restoration to normal mentality.

Of equal importance are the cases characterized by too frequent nocturnal emissions. Just what is normal and what is abnormal in the matter of nocturnal pollutions in a growing youth is hard to say, because individuals differ, but I believe two or three a month would be considered normal. If a boy can take these occurrences without concern or worry they require no attention; but if the emissions occur so frequently as to have a deleterious mental or physical effect, local urologic treatment is indicated. This should be supplemented by psychotherapy that will direct his sexual energy to other channels as a form of sublimation—work or physical play. In some instances there may be an associated hormone dysfunction or a vitamin deficiency which may be of an extreme degree and result in general depression, hysteria, hypochondriasis or other phenomena. In all of these conditions the patient's heredity as well as his mental status and environment are essential factors in making the diagnosis and instituting the correct therapy.

As the boy grows older and approaches or attains

maturity, the problems which bring him to the urologist are connected principally with the act of sexual intercourse and its complications. The first thing to remember, in this connection, is that every man and woman is born with an inherited sex potentiality which makes itself manifest throughout life in a corresponding coefficient of sex virility. In some it is strong, in others weak, and in between these extremes there are as many degrees of sexuality as there are individuals. When we consider psychotherapy as a medium of treatment we must bear in mind these differences because of the variable constitutional factors which must be taken into account.

The urologist often has to consider the question of sexual abstinence in young men and it is not always a simple matter to determine whether for this or that young man long-continued abstinence is consistent with mental and physical health and well-being. It all depends on his sexual endowment. Abstinence for long periods may be easy for the individual with a low sex potential, because the sex factor is an inconspicuous element in his life. In the strongly sexed, however, it is a powerful driving force which often dominates his entire personality. Before making a decision, we must know all we can discover about this phase of his personality and we must act accordingly. Very often we are confronted with the nervous, highly strung youth who has attempted intercourse and has failed. The psychic effect on the youth may be very profound. It may create a strong sense of inferiority, a fear that he is not as much a man as his friends, who boast of their prowess and their conquests. Psychotherapy is of the utmost value in restoring his confidence in himself. Unless there is an organic defect or disease, that is all that he requires. Local treatment also may be necessary if there is a chronic congestion of the genital organs due to long-continued masturbation.

In girls the period of puberty and adolescence do not create problems which bring them to the urologist. They are more likely to become involved in some form of sex delinquency which may require the attention of the gynecologist or, in more unfortunate cases, the obstetrician. Psychotherapy is extremely valuable in helping these girls toward a readjustment of their sexual behavior.

In the adult male the rôle of psychotherapy includes both the urinary and sexual functions, mainly the latter. Urinary dysfunction in the adult is generally due to an organic disease somewhere in the urogenital tract and therefore requires urologic therapy. There are certain conditions, however, in which slight pathological changes associated with a neurotic background are out of all proportion to the severe clinical symptoms produced. Psychotherapy is most useful in these conditions. The diagnosis is made by urologic methods which generally reveal little or no pathology that might account for the excess symptoms. As an example, we may consider the rather common cases of increased frequency of micturition and more or less irritation which may attain the status of severe pain. The patient appears to be in real distress; but when we make a careful investigation with the cystoscope and all the other diagnostic refinements we find no organic changes except perhaps a congested prostate and seminal vesicles and a hypersensitive vesical neck.

It is typical of this condition that there is no nocturia. The patient sleeps through the night undisturbed, but in waking hours the frequency returns. Usually the urine is hyperacid. The acid urine coming in contact with the hypersensitive vesical neck or trigone, induces the irritation and increased frequency. Neutralization or alkalinization of the urine and reduction of the sensitivity of the affected parts relieves the irritation. Psychotherapy directed to convincing the patient that there is no pathological condition that requires surgery helps to restore his equanimity and brings mental relief. Men of fifty and over have been operated upon under the erroneous diagnosis of prostatic hypertrophy, but as the operation does not eliminate the neurogenic factor the symptoms persist. In women, the most common condition in this category is a mild trigonitis which responds to local treatment supplemented by psychotherapy. In these cases in both sexes, there is usually a strong neurasthenic element.

In the sexual sphere, particularly in the male, psychotherapy has a much more extensive and varied field of usefulness. The close relationship between the nervous system and the sexual organs need not be dwelt upon; it is well-known. In the male, sexual neurasthenia, socalled, is a frequent phenomenon in chronic prostatitis. In addition to the usual neurotic symptoms, it is characterized by reflex pains and aches of all sorts anywhere in the body, today in one place, tomorrow in another, intense enough to incapacitate the individual one day and altogether absent the next. Routine urologic treatment is effective insofar as it helps to remove the prostatic pathology; psychotherapy is always essential and useful for the neurotic manifestations. In some of these men the neurosis persists in spite of everything that is done, perhaps because of it. It seems as though the neurotic individual finds a secret joy and pleasure in his neurosis and hates to give it up.

Any interference with the physiological movement of nerve impulses from the brain and nervous system to the genital zone may and usually does induce a psychological block, resulting in some form of sexual dysfunction. The most common form in the male is sexual impotence in varying degree. In this field we are dealing with a highly sensitive physiological mechanism of a most complicated character in which psychic, physiological and somatic elements are closely related. One of the earliest symptoms associated with sexual dysfunction, as already mentioned, is the too frequent occurrence of involuntary nocturnal emissions. This is caused by a chronic congestion of the genital organs associated with a neurotic factor which results in a disturbance of the ejaculatory mechanism. The cystourethroscope usually reveals gaping orifices of the ejaculatory ducts, indicating atrophy and loss of tone, besides distortion and enlargement of the verumontanum.

Practically the same pathological changes are seen in cases of premature ejaculation, which is a common type of sexual dysfunction. It is believed by some to have a direct connection with childhood enuresis because of the common enervation of the ejaculatory and bladder muscles and the similarity of the ejaculation and micturition mechanisms; furthermore, many patients give a previous history of enuresis. Both psychic

and somatic factors are involved. In many instances, premature ejaculation is the prelude to the ultimate stage of impotence—partial or complete loss of erectile power. When we speak of impotence we generally refer to the latter condition, but the term is all-inclusive of conditions which impair normal intercourse.

There is still no explanation of the fact that in one man the psychic and somatic factors combine to induce hasty ejaculation with no impairment of erection, while in another with the same factors the erectile power alone is affected. It seems that these factors have a selective effect on the ejaculatory mechanism in one case and on the erectile mechanism in the other.

The study of functional impotence involves three broad groups: 1, young and middleaged men who, under normal circumstances are at the age of optimal sexuality but have lost some or all of their previous virility; 2, the aged or prematurely aging, in whom the impotence is but one element in the syndrome of the climacteric; 3, cases of hypogonadism, in which there is a definite deficiency of gonadal hormone, either congenital or acquired. Our present interest is with the first group—the young and middleaged with deficient virility. Obviously psychotherapy can be of no help in restoring potency in the aged or in those who have been constitutionally subnormally potent. Neither psychotherapy nor anything else can make a Don Juan out of a Galahad. There's no use in trying. It is more practical and realistic to place the patient in his proper category, to determine whether his impotence is due to organic disease, to some psychic disturbance, to premature aging due to hormone deficiency, to self-deception, or to a possible combination of these factors. It is well to remember that age is no criterion of sexual virility—one man may be aging and sexually subnormal at forty while another may be young and virile at seventy.

Urologists naturally regard impotence as the result of some organic disturbance in the urogenital tract, mainly in the prostate and seminal vesicles. Many cases of impotence are associated with pathological changes in these organs, it is true, but we also see equally many, perhaps more cases of prostatic pathology in which potency is not affected. There can be no doubt, however, that the presence of a chronic infective process in these organs may act as a focus for the development of a neurotic state which eventually assumes the major rôle in causing the impotence.

Because the verumontanum is so closely connected physiologically with the prostate and vesicles, urologists also see a causal relationship between a pathological verumontanum and sexual impotence. A vast amount of instrumentation has been practised in recent years for this condition and, on the whole, with beneficial results; but without much if any benefit in cases having a highly neurotic background. We see instances of functional impotence in which the verumontanum and posterior urethra are, to all appearances perfectly normal; and vice versa, just as many in which there is considerable pathology producing marked urinary and neurotic symptoms without the slightest interference with potency. It is my belief that the pathological condition in the verumontanum is more often the result rather than the cause of the impotence. The generally congested condition of the sexual organs is due to overstimulation or strain brought on by repeated attempts to function with a deficient or depleted nerve force; like trying to get fifty horse power out of a ten horse power engine. The result is a more or less complete breakdown.

In a study of three hundred cases of sexual impotence which I made in 1933 (3) it was found that in fifty-one percent of cases there was a definite history of abnormal sexual activity, resulting eventually in functional deficiency. These sexual aberrations may be classified as long-continued masturbation, ungratified sex hunger, constantly repeated withdrawal, sex excitement without orgasm, sexual excesses and some form of perversion, long continued. I believe these practices eventually exert a deleterious effect on the genital apparatus and the sexual nervous mechanism, which results in various forms of dysfunction, of which impotence is the most common.

In any form of impotence we generally find an associated state of mental depression characterized by introspection, worry, anxiety, insomnia, and a sense of inferiority and frustration. In other words, given a depressed nervous system, with genital organs previously damaged by improper sex living or actual disease, and the stage is set for a varying degree of breakdown in the sexual function. Obviously, therefore, the management of these cases require both urologic treatment and psychotherapy. The neurotic element may not be apparent on the surface and the patient may cover his tracks, so to speak, by an air of bravado and self-deception, but some deep-seated psychic disturbance usually exists under that air of bravado which can be dug up and exposed by careful and thorough investigation.

Under the influence of mental depression due to economic reverses, domestic infelicities, mental or physical exhaustion, inhibitions and obsessions, the sexual function is one of the first to be adversely affected. Energy is withdrawn from the sexual zone to meet the unusual demands of the brain and nerves. This, I believe, is the explanation of the well-known fact that the tired, worried or psychically obsessed man usually is sexually depressed. The sexual depression may be temporary, lasting only so long as the acute drain on the nerve energy persists, or it may become permanent if the nerve strain is not relieved.

Psychotherapy and urologic therapy as well, cannot be of any assistance, however, in the impotence resulting from organic changes in the nervous system such as occurs in tabes, spinal cord tumor and paralysis, and in certain nerve injuries. On the other hand, in all cases of genital pathology local treatment is essential and is usually helpful to a considerable extent, thereby preparing the ground for the readjustment of the psychic factors which contribute so materially to the sexual dysfunction. By the readjustment of his sex life and his general way of living, by helping him to solve his problems or remove his inhibitions and obsessions, the patient can be restored to his former mental equilibrium. Psychotherapy can thus stimulate the return flow of the energy that has been drained away from the sexual zone, enabling the sexual organs again to perform their normal physiological function.

In the positively psychic group, the special features characterizing the individual case must be studied. There are many variants. For example; in one man the impotence may be limited to one certain woman,

his wife perhaps. This obviously is not so much a medical problem as a problem in domestic relations. It must be dealt with differently from the rather unusual case exemplified in a patient who was extremely miserable because of his total impotence with women other than his wife. It is also important to determine whether the patient really is impotent or has merely convinced himself that such is the case. It may seem elementary, but it is seldom realized that the physician cannot make a diagnosis of functional impotence even under the most exacting examination. He has nothing but the patient's word for it. He must satisfy himself that the patient is not misleading him, unintentionally of course, into treatment for a condition which does not exist. This is not always easy. The sexual life of the patient and his experiences, his home life, and everything about him that may throw some light on the question, must be searchingly investigated.

One of my cases involved a young man of twenty-eight, a missionary, whose impending marriage was being postponed repeatedly because he had convinced himself and several physicians that he was impotent. This conviction was based on two unsuccessful attempts four or five years previously, which constituted his entire sex experience. For an entire year he had been intensively treated in a Western city by routine urologic methods, without benefit. He failed to convince me when I first saw him that he was really impotent. As a result, he was cured of his socalled impotence and his confidence restored in one day by the simple and not unpleasant expedient of spending an afternoon in the intimacy of an attractive young member of the oldest profession. His trouble was purely psychic, yet he had undergone considerable somatic treatment with no regard whatever for the psychic aspect of his case.

It may be in order to consider briefly the question of marriage which is often prescribed for impotent men, on the theory that the impaired sexual function will improve under the healthful regime of marriage. It is my firm belief that this advice is rarely if ever justified in long-standing established impotence, either as a matter of morals or medicine. We must remember that two lives are involved in marriage and it is inconceivable that we ever can be justified in employing an innocent young woman as a therapeutic vehicle for the restoration of sexual potency. An impotent man has no right to think of marriage especially as a therapeutic expedient. The same advice is frequently given to habitual masturbators, in the hope that marriage will stimulate a desire for normal intercourse as replacement for masturbation. Some of the most tragic situations I have ever seen have been those in which marriage has been prescribed as a cure for sexual dysfunction or aberration in men, and utterly failed.

A fairly common type of impotence in which psychotherapy has no peer is that seen in newly married men, generally neurotic. The condition is purely psychic and transient and is brought on by various neurotic factors—shyness, embarrassment, excitement, false respect for the bride and fear of causing pain, and lack of sexual experience. Patient explanation and sympathetic understanding quickly remove the inhibition and potency is restored. In the first year of marriage, there may be various specific neurotic disturbances which are transient in nature but nevertheless require adjustment. In women there may be an element of frigidity or lack of sexual interest which may have a discouraging effect on the libido of her mate. On the part of the male there may be occasional temporary instances in which premature ejaculation or complete impotence disturb the normal sex relations of the couple. These incidents may require the adjustment which psychotherapy can provide. Hypersexuality in one party and hyposexuality in the other create a situation which often results in conflict, disagreement, frustration and not seldom in divorce. When an elderly man, with declining or nonexistent sexual virility, marries an erotic woman, whether young or old, he not only invites domestic discord and trouble but may be signing his death warrant, for he may die within a few days or weeks as a result of the inordinate strain on his physical powers. These tragedies can be averted by prophylactic psychotherapy, so to speak, in advance of the marriage.

Perhaps the most troublesome cases are those in which childhood and adolescent training has created an inhibition of sex as something unclean, sinful and indecent. One often wonders why people with such thoughts and ideas ever marry, but they do, and they create a lot of trouble for themselves and others. Psychotherapy can help to eliminate these inhibitions and portray sexuality in marriage as a universal imperious force which can be made capable of beauty, healthful and productive of the finer instincts of life. Some years ago, one of my assistants, a young man of great promise married a beautiful young woman of the Junoesque type, the daughter of an Italian banker. She was fanatically religious and persistently refused to consummate the marriage on the ground that marriage was a sacrament, without physical implications. She insisted that everything about sex was sinful and repulsive. A great deal of dirty linen was washed in public; the press called her the "marble bride". An annulment was refused by the Court for some incredible reason, the doctor went to jail for nonsupport and finally committed suicide.

By way of contrast, psychotherapy may be effectively employed in cases of priapism of psychic origin. These cases probably occur as the result of psychic disturbance or reflex nerve stimulation. They usually are transient but they may persist for months. In one of my cases a neurotic pious celibate of twenty-six, preparing for the Catholic priesthood, developed priapism, which persisted for several months. Careful investigation revealed that he was strongly sexed; that he had masturbated considerably, both physically and psychically, and that he was constantly harboring lewd thoughts which he could not keep away. Evidently there was a mental conflict between his natural sexual impulses and his effort to remain "pure" for the priesthood. Urologic treatment was of no avail. On consultation with a noted Catholic who was familiar with the teachings of the Church, he was advised to renounce his ambition to become a priest, to remain at his job of street-car motorman, and to give his sexual impulses a chance to function normally. He accepted the advice, made a full recovery and subsequently married.

Within the past year or two, I have been impressed by the inadequacy of urologic treatment without the

aid of psychotherapy in a number of young service men who had been referred for various sexual disturbances. All of them showed a neurosis of some kind, not sufficient to disqualify them for military duty but enough to make them uncomfortable and unhappy. As an example, a strong husky fellow from the South, hypochondriac and with suicidal impulses because of frequent nocturnal emissions, premature ejaculation and a fear that he was going insane because of excessive masturbation in his younger years, he had been assigned to an easy clerical task which kept him indoors and gave him plenty of time to worry and brood over his troubles. He had been given the usual local treatment and dosed with bromides and other sedatives, but nothing apparently was done by way of psychotherapy. Psychotherapy takes time and the army doctor hasn't much of that precious commodity to spare on neurotics. When he consulted me, in addition to the usual treatment of the congested genital organs, I advised him to ask for a change of assignment which would take him outdoors, with hard manual labor to keep him occupied and give him little or no time to worry and brood. This was accomplished with some difficulty, but it helped him materially. In addition, he was encouraged to reconstruct his sexual life and his outlook on things generally, on women in particular, and to rid himself of his religious and moral obsessions regarding sex and its implications. In due time he made a satisfactory adjustment, was sent overseas, and seems to be doing quite well.

In the treatment of impotence and related sexual dysfunctions, it is futile to concentrate on one factor and ignore the others. Treatment must deal with the entire complex of the patient's mental and physical equipment. Failure of routine urologic treatment often is due to the fact that the important psychic element is not generally taken into consideration; that is to say, failure to employ psychotherapy in addition to such urologic treatment as the organic physical changes may demand. Psychotherapy is most effective in that it reassures the patient that his ailment is not associated with some serious organic defect and restores his confidence in himself. The competent psychotherapist avoids the common error of ridiculing the patient and his complaint, telling him to go home and forget it. But the patient cannot forget it. To him the impotence or other dysfunction is something real and serious, however absurd this attitude may appear to the psychically blind physician. A sympathetic approach with understanding is the first step toward success in dealing with these cases.

Homosexuality and perversions are not within the realm of the urologist unless they are associated with some anatomical defect or urogenital disease. Psychotherapy deals with these conditions successfully. It impresses the patient who is troubled because of the practise of perversions with the fact that these sexual variants are not necessarily evidences of degeneration or mental disease, but are quite normal if practised as preliminary sex play to normal intercourse and not as an end in themselves.

In the realm of syphilis, one of the conditions in which psychotherapy can be effective is in those rather common cases of syphilophobia in which the patient has convinced himself that he has acquired syphilis, in spite of any history or clinical evidence of the disease. Among the factors which may create this self-deception is an erroneous positive Wassermann report. Much psychic damage has been done in this manner. Medical men who accept without question every positive laboratory report as infallible are partly if not altogether responsible for this situation. In the absence of clinical or historical support, a positive report should be considered suspect. Further serological tests should be made in other laboratories and under different circumstances, and if these should be negative, it is reasonable to consider the positive report erroneous. It is extremely difficult to eradicate this fixed idea. The patient must be told and convinced that laboratory reports are not sacrosanct, that technical and clerical errors do occur, that extraneous factors may give false positive reactions, that his positive report is not supported by clinical or other evidence, that subsequent reports are negative, and that he is therefore not suffering from the dread disease. Another common form of syphilophobia is seen in the neurotic who fears that he has acquired syphilis either through masturbation or illicit intercourse many years back, in spite of all evidence to the contrary. Still another is the chronic hand-washer, who fears he will contract the disease unless he repeatedly washes his hands all day long. Psychotherapy is the only treatment for these conditions.

In conclusion, it may be said that the sex lives and the happiness of innumerable men and women can be salvaged if the urologist wisely employs what psychotherapy can offer, either by itself or as a supplement to urologic therapy, in many of these distressing psychourologic conditions.

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REFERRED PAIN IN FIBROSITIS

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Fibrositis is an exceedingly common complaint and one of the most frequent causes of bodily pain. The general term, fibrositis, is used to cover rheumatic conditions of nonarticular origin, such as (a) inflammatory reactions of fibrous tissue, insertions, aponeuroses and sheath of muscle—muscular fibrositis; (b) inflammations of fibrous portions of the capsules of joints and related ligaments—periarticular fibrositis; (c) inflammations of tendon sheath and bursæ—bursal fibrositis; and (d) the inflammatory conditions of the supporting tissue of certain nerves with secondary pressure upon arterioles and nerve filaments—perineural fibrositis or perineuritis.

The commonest varieties are the intramuscular and

the perineural forms, involving various areas of the body. The main features of fibrositis are pain, stiffness and limitation of movement, with little or no effect on general health. As the pain is often referred to remote parts of the body, a careful examination is necessary in order to ascertain the site of the pain's origin. It is often difficult to localize accurately the source of pain. The aim of this article is to present certain suggestions as to how and where to look for the structures pathologically involved.

Location of Myalgic Spots

The patient usually complains of pain or aching in the area of various muscles or around joints where fibrous tissue is present. On examination, practically nothing is found except the occasional appearance of nodules of varying sizes in the affected region. Their detection probably has been stressed too much as they do not necessarily indicate the source of pain. They are seldom found and often are entirely painless on pressure.

Our aim in localizing the site of referred pain in fibrositis is to search for circumscribed small areas which are tender on pressure. The skin above these tender spots is usually not swollen and does not show any signs of inflammation. Gutstein (2) introduced the term myalgic spots for these tender areas. Their characteristic features are:

(a) By exerting pressure on them we are able to provoke pain similar to that of which the patient complains;

(b) The patient usually is not aware of these spots;

(c) We find them always in the same segmental areas in which the referred pain is located;

(d) We are able to abolish the pain, which is often referred to remote areas by infiltrating these tender spots with a local anesthetic.

Keeping in mind these facts we realize that the main problem in the treatment of fibrositis with a local anesthetic is to find and localize anatomically the pathologically involved structures of fibrous tissue, i.e., the myalgic spots.

The lack of knowledge of the physiology of muscular pain has been recently reviewed by Lewis and Kelgreen (3). They proved, experimentally, that pain induced in a muscle by injecting hypertonic saline is diffuse and often felt at a distance, but always over a definite area, following the segmental pattern. The distribution of pain for a given muscle was found similar in different individuals. They concluded that the segmental areas of pain displayed are determined by the nerve roots involved in supplying the corresponding muscles, so that different muscles supplied by a common root will yield a common field of pain distribution. Kelgreen (3) further found that the false localizations of pains arising in muscles, fasciæ and ligaments are of the same kind as those which occur in visceral diseases. By injecting saline bilaterally into the rectus muscles the pain produced was colic-like, and was felt deeply below the abdominal wall. He believes that there is a general afferent nerve supply common to deep somatic muscles, tendons and ligaments, and to certain visceral structures.

We must first exclude the possibility of visceral pain which may be referred to the muscles. It is known that pain in diaphragmatic pleurisy is often felt in the neck, usually in the skin distribution of the third and fourth cervical posterior nerve roots, from which the phrenic nerve derives its fibres. Pain arising within the heart is often felt in the muscles of the chest wall, and is referred to the left arm. Pain in duodenal ulcer, which is generally felt in the middle line near the umbilicus, is often referred to the right lumbar muscles, etc.

It is well known that inflammations of joints or some irritation of their structure or nerve supply, caused by a minor displacement, may produce pain in the muscles. Many intractable headaches and neuralgias have been cured by manipulations. The good and often immediate results of manipulative treatment prove that some pathological condition in the joint has been remedied. While the scope of this article does not include referred pain arising within the joints, I should like to stress that the possibility of referred pain of intraarticular origin should be kept in mind in the search for myalgic spots. It is universally recognized that pain in the early stages of osteoarthritis of the hip joint is localized by the patient in the knee and along the anterolateral surface of the thigh. Pain radiating down the arm is often due to pathological changes within the vertebral joints of the cervical spine.

Taking the segments of the vertebral column in turn, from the cervical to the lumbar, we find the following common localizations of myalgic spots.

Pain referred to the upper cervical segment is usually felt in the occipital region, radiating up the back of the head in the form of occipital headache. On examination, tender spots are found in the fleshy part of the trapezius muscle above the shoulder, or in its tendinous attachments at the back of the neck.

As we proceed downwards we reach the area of the lower cervical and upper thoracic segments, where often complaint is made of pain referred to the shoulder joint, the arm, neck and upper part of back. There is sometimes some impairment of raising the arm above horizontal level. Myalgic spots are found in the upper fibres of the trapezius, near its attachment to the spine, at the scapula, and acromial part of the clavicle. The posterior edge of the deltoid and the proximal end of the long head of the biceps are often involved as well in this complaint, which is called periathritis humeroscapularis.

In similar conditions I have often found spots in the muscles forming the anterior and posterior folds of the axilla, namely, pectoralis major, teres, and latissimus dorsi.

Tender spots in the sternocostal region of the left pectoralis may give rise to pain in the precordial region—pseudoangina—and spots in the intercostal muscles cause pleurodynia. The respiratory movements may cause pain which simulates dry pleurisy.

Returning to the upper arm, the flat tendon of the biceps spreading above the elbow joint is also a common site of tenderness on pressure. Also, muscles originating in the epicondyles of the humerus, especially the conjoint tendon of the extensors, are often affected. Myalgic spots in the lower part of the triceps sometimes give rise to referred pain at the inner side of the forearm extending to the little finger. The flexors of the wrist and fingers, near their attachment to the lateral epicondyle, and the styloid processes of the radius and ulna should never escape our attention, when searching for tender areas in this segment.

In the lower limb, the adductors, especially their attachment at the medial condyle of the tibia, offer a common site for myalgic spots. I have found these parts almost always affected in osteoarthritis of the hip and often in cases where the x ray examination of the knee and hip joint gave negative results. They are almost always bilateral and are usually found in obese women over fifty years of age, who complain of general fatigue, heaviness in the legs, and some pain in the knees. Examination shows that the joint function is normal and yet the patient usually comes with the diagnosis of arthritis in the knee. The infiltration of tender spots, found at the above described attachment of the adductors, with a local anesthetic will almost invariably bring immediate relief. The appropriate name for this condition would be fibrositis genu, corresponding to fibrositis humeroscapularis in the upper limb; while the latter condition is always unilateral, the former is usually bilateral.

In pain radiating down the thigh, tender spots may be found apart from the adductors, in the tensor fascia latæ above the hip and at the middle of the thigh, where the fibres of the tensor fascia latæ go over into the ileotibial band. These spots often simulate sciatica. In cases of lower backache, tender spots should be looked for in the fibres of latissimus dorsi where it originates in the fascia lumbodorsalis, and its attachment near the iliac crest. The posterior surface of the sacrum and coccyx, the gluteus medius running over the trochanter, the ileotibial band and the edges of the quadratus lumborum near the iliac crest may show some tender spots on pressure. The treatment of these spots with an anesthetic may restore normal lumbar flexion and straight leg raising. Pain arising in the lumbodorsal fascia is sometimes referred to remote parts of the leg.

I should like to mention that myalgic spots in the conjoint tendon of the extensors attached to the lateral epicondyle of the humerus may give rise to a condition similar to the pain in tennis elbow. Pain and limitation of movement may have persisted for considerable time and a few injections with procaine are often followed by restoration and painless elbow function.

In precordial pain, especially when it is not related to physical strain, we should always keep in mind the possibility of tender spots in the pectoralis and costal muscles. They may cause referred pain along the distribution of Th3-Th6, felt in front of the chest and in the left arm, in the surface distribution of the Th1-Th2 posterior nerve roots. If the injection of these spots relieves the pain, as frequently happens, this proves that the pain has not arisen within the heart, and is entirely independent of organic cardiovascular disease.

Technique of Localization

Test for tenderness by pressing with the top of the thumb or the index finger on the origin, insertion, and along the fleshy part of the muscle. The patient should relax, especially in those parts where the search is made for myalgic spots. In examining the back the patient should sit with his back towards the examiner; when spots in the lower part of the back are being investigated, the patient should be in a recumbent position. When examining the upper limb the patient's forearm should rest on the left hand of the examiner, and when the lower limb is examined he lies on his back. In these positions the muscles affected are relaxed.

The pressure of the examining finger must be made in such a way as to cause only moderate discomfort when applied to normal muscle. The patient easily distinguishes between such a pressure on normal muscle and on a tender painful spot. The pain elicited from involved structures is sometimes agonizing, causing reflex movements. Thus, pressure on myalgic spots in the trapezius muscle causes jerky retraction of the head to the involved site and movements of the chest to the opposite side. Pressure on spots in the adductors in fibrositis of the knee always elicits reflex flexion of the knee and hip. These involuntary movements in parts not pressed upon are pathognomonic of myalgic spots. It is also important to watch for pain reaction on the face of the patient.

If there is only a slight pain and the presence of myalgic spots is uncertain, it is advisable to press upon the corresponding part of the other side, when the difference in sensations will be obvious. One should never be satisfied with the detection of one spot only, as tender spots are usually multiple. Definite relief can be obtained only if all the spots are injected. The site of spots already found can be marked with a pencil or iodine.

Treatment of Myalgic Spots

The equipment for treatment with a local anesthetic consists of one two cc. syringe and one per cent solution of procaine in normal saline. The injection is carried out under aseptic conditions. The skin is disinfected and a sharp, fine hypodermic needle used. Inject only one cc. into each spot. It is not advisable to inject larger quantities as the tender spots are small and certainly do not exceed the circumference of the pressing finger. The injected fluid must reach the spot lying in the muscle or its tendon. Should the injected spot still be tender on pressure a few minutes after the injection, it is obvious that the anesthetic did not reach it. Such a spot has to be reinjected with a larger dose, say three cc. The needle should then be pushed deeper and injected slowly on withdrawing the syringe. It should be realized that spots lying in deeper structures often escape the injection. This applies, of course, only to the fleshy parts of larger muscles and not to their origin and insertion where tender spots are common. Immediately after injection the spot is massaged for a few moments with cotton wool, and any bleeding is stopped with a small piece of adhesive.

The injected spots are carefully charted and the patient instructed to make note of any change for the next seven days, after which the results of the first treatment are reported as follows: 1, pain disappeared entirely; 2, pain still present, but not so severe; 3, there is no change.

In the first instance a second injection is not necessary and the patient should report only if a relapse occurs. In the second and third instances, a search should again be made for tender spots, and if found, should be reinjected. If there is no improvement after this second injection, another type of treatment, especially physical therapy, should be instituted.

In many cases of fibrositis myalgic spots will not be revealed on examination. It is not advisable to inject spots which are found to be only slightly tender. The injection of such areas will never help. A myalgic spot always elicits a definite pain on pressure. The pain is often felt at distance and is accompanied by reflex

movements, as described above. In cases where improvement occurs, the patient usually cooperates, often saying: "Doctor, I found a few tender spots and I marked them; will you kindly inject them for me?"

Pathology and Physiology of Myalgic Spots

Recognizing that in myalgic spots the threshold for pressure stimuli is lower we may conclude that the sensitive nerve endings there, are in a state of hyperexcitability. This is apparently caused by local circulatory disturbance. The unaltered skin above the spots and the absence of any local swelling exclude the possibility that accumulated tissue fluid caused pain, by the simple physical effect of tension. As any kind of efficient physical treatment aiming to increase local blood supply often causes the spote to disappear, we must assume that impaired circulation with consequent deficient nutrition is mostly responsible for the development of myalgic spots. This assumption is also supported by the fact that myalgic spots usually develop per se in tissue which is poorly vascularized. The investigations of Lewis (7) on pain, developed in exercising muscles with impaired blood supply, brought ample evidence that ischemic areas are tender on pressure. Lewis argues that the pain of coronary occlusion and intermittent claudication is due to muscle activity during obstructed circulation. He suggested that muscular activity liberates a pain producing factor P, which mally passes out into the tissue spaces and is carried away by the blood stream. If the circulation is occluded or impaired to a certain extent, the P factor accumulates and causes pain. We see that there are many examples of pain arising out of malnutrition consequent upon impaired blood supply. We may, therefore, regard the myalgic spots as small ischemic areas.

It seems necessary to explain briefly the mechanism regulating the blood supply of muscular and fibrous structures. The vessels in the skeletal muscles are innervated by sympathetic nonmedullated vasomotor fibres. On the supposition that myalgic spots develop only in areas of impaired circulation, it must be assumed that the vasomotor fibres of the sympathetic are therefore overstimulated, with consequent vasoconstriction and malnutrition.

How far bacterial toxins, the products of disturbed metabolism, cold damp weather, etc., are responsible for the overstimulation of the sympathetic is so far speculative. It is generally known that patients with fibrositis often suffer from sluggish circulation. A cold and often flabby and faded skin is frequent in rheumatics, and is due to inadequate circulation. A subjective feeling of cold in rheumatic locations is also commonly observed. Evidently through the reflex relation of the skin and the underlying tissues the same circulatory changes are provoked in the fibrous structures of muscles where myalgic spots develop.

Further study of cutaneous circulation in fibrositis may throw light upon the reasons for the development of myalgic spots and explain the logical basis of their being ischemic areas. The often permanent results obtained in the treatment of fibrositis by injecting the myalgic spots with a local anesthetic are apparently due to the paralysis of vasconstrictors supplying their fibres. The immediate vasodilatation is followed by restoration and normal physiological function of the affected areas.

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The Illness of a Genius

In these times, when mental sickness, or aberration from what is termed the normal, exists all over the world, it is not amiss to write about the abnormality of an undoubted genius. A correct definition of genius is practically impossible, but a description of the life of a person in whom that divine spark is present is not difficult. A remarkable example is Jonathan Swift. His brain was not only abnormal but morbid. His mind was tinged with bitterness, owing, partly, perhaps, to his early environment and developed by his boundless ambition, doomed, it seemed, always to frustration. He never reached the pinnacle to which he was entitled.

His life throughout was tragic although he himself, or the power within him, was to blame for many of his misfortunes. It is interesting to note that unlike many geniuses, he was not precocious. Dull, or seemingly so, as a youth, he did not discover his mental gifts until he was twenty-five or more, or he had not the opportunity to use them. As a writer he was unique. In true literature he has been excelled by none. Morbid, imaginative, sarcastic and sometimes venomous, it could have proceeded only from a pen ofttimes steeped in gall but guided by a brain of which the outlook was far beyond the range or ken of the ordinary man.

Swift was erratic in all his actions and his widely talked of loves were in keeping with his behavior in other phases of his turbulent mental life. On whatever stage he acted he was a power.

It is stated in the fragment of an autobiography which Swift left that from boyhood he had suffered periodically from attacks of giddiness and these continued throughout his life. They were termed fits by him and other writers. What were these attacks? Were they migraine, the French *petit mal,* or epilepsy, French *grand mal?* Probably they were migrainous since, as far as the writer knows, it has not been suggested that they were true epilepsy. It is interesting to note that many great men have been epileptic and many more were migrainous. These affections do not appear to affect the brain injuriously, until, perhaps, they have existed for many years.

The case of Swift is curious because epileptics and migrainous individuals generally are normal between attacks and Swift was seldom normal; he was never as other men are. Had he a taint of insanity? Pope who was at one time his friend, and with whom he quarrelled, said "Great wits to madness close allied." Did this line apply to Swift who sometimes overstepped the line of demarcation which ended in mental deterioration and decay? In any event, he was an unmistakable genius who did not live in vain.

Editorials

The Coming Year

We greet the new year with full knowledge of the solemn sacrifices which must be made on the many fields of battle to insure victory for the progressive forces of man. Medical men have done all they could to alleviate the injuries and sufferings that have been inflicted upon their fellowmen both on the field of battle and on the less tumultuous field of battle on the home fronts.

Medical science has employed, and will continue to employ, on a larger scale than ever before the knowledge of new developments in chemotherapy and pharmaceutical progress in an endeavor to save as many lives as possible. Everything possible has been done to organize the medical services so that the injured could receive prompt attention and so more effectively defeat death.

Yes, we have a grim year ahead, but it is full of promise, for we feel certain that the European conflict will be well won within the coming year. There will, however, be even greater battles to win to insure no repetition of the attempt to settle man's differences by means of war. Ways must be found to shackle forever any maniacal leaders who seek aggrandizement through wars of conquest. The duty of medical men is to prolong lives, to alleviate suffering, and to help keep people in a state of well-being and happiness. This does not seem to be the aim of those dictators who plunge us into world war. Medical men should bitterly oppose the enslavement and brutality which these crazed fascists thrust upon their people.

No professional group has been called upon to make so great sacrifices both in the armed forces and in their services for the civilian population as has the medical profession. Their work among the civilians has been doubled and trebled, and their devotion to duty in the military fields has been unequaled.

We greet all the members of the medical profession and hail their heroism and sacrifice. May this new year bring to us and our allies victory and the dawn in Europe of better and more constructive ways in the future.

Monte Cassino

The way of the Fifth Army from Salerno to Rome is bound to touch Monte Cassino, and with it one of the most important places where Western scientific knowledge originated. During the Middle Ages, the monks in this Italian monastery saved invaluable medical documents. St. Benedict, coming from Subiaco, found paganism still surviving when he founded the monastery of Monte Cassino in 529 A.D. on a mighty hill, the site of a temple of Apollo. Benedict acted frequently as a physician. He "healed the sick, the lepers and the possessed", and cared particularly for the sick monks.

The Benedictine monasteries became, according to James J. Walsh, the repository of important traditions in medicine and surgery. In fact the monastic influence is apparent in the beginnings of modern medical education. To Abbot Desiderius, who became Pope Victor III in 1086, we are probably indebted for the preservation of the writings of Varro, Tacitus, Apuleius, Terentius, Horatius, Seneca, Flavius Josephus and other eminent ancient authors. In Monte Cassino the learned monk-doctor, Constantine of Africa, devoted himself to the translation of medical works from the Arabic language into Latin until his death in 1087. By the Arabic route, the practitioners of that period became acquainted also with the writings of Hippocrates. His books had previously been translated into Latin, but had not been understood and indeed had hardly been noticed by medical practitioners. Monks from Monte Cassino played an important part in the foundation of the Medical School of Salerno.

Another monk of Monte Cassino, Alfanus, was known to his contemporaries as both poet and physician. At the time of the suppression of the monasteries in Italy, in 1866, Monte Cassino was declared a national monument, and up to now it has lodged an educational establishment, Seminarios and Collegio.

The library of the monastery still comprises eighty thousand volumes, twelve hundred manuscripts, among which are numerous incunabula, and forty thousand records. The archives comprise also eight hundred documents of emperors, kings, dukes, etc., and the complete series of papal bulls that relate to Monte Cassino, beginning with the eleventh century. We can understand the despair which the learned monks felt in 1799 when soldiers of the French Revolution attacked the monastery and built a fire to prepare their supper in the midst of archives, burning the most valuable manuscripts. Let us hope that the Nazi hordes that destroyed the invaluable library and manuscripts of the University of Naples, will have no time left to repeat this act of vandalism in Monte Cassino.

Malaria in the Army

The Office of War Information, in a report on the health of the armed services, gives a partial survey of the present state of malaria in the Army. Malaria constitutes a major health menace of the Army and Navy in foreign land operations in malarial areas. At home the rate is at a low level. The Army reports a rate of infection of about 0.6 men per thousand annually for this disease in 1942, and only a slightly higher rate thus far in 1943. This record is particularly good, because it includes men in the continental United States who had contracted the disease in foreign areas.

The Army's malaria rate for overseas units in 1942 was about thirty men out of a thousand, and so far in 1943 the equivalent rate is about eighty. The rise this year is attributed to increased war activity in malarial areas. The number of cases in any definite locality cannot be published, because the enemy could use such figures to estimate the number of soldiers stationed in that area. The Navy's statistical picture shows: North African bases, 17.45 per thousand; outlying and "confidential" bases, 86.03; fleet marine forces (landing forces), 155.53; naval training stations, 0.04; forces ashore, 15.00; forces afloat, 8.40, and the entire Navy, 13.59.

The fight against malaria is primarily directed at destroying, or repelling, the mosquitoes which transmit the germ. There has been made available to troops a repellent substance which, even under strenuous combat conditions, is effective for four hours. It is colorless and odorless, nonirritating, and does not damage clothing, and a two-ounce bottle contains enough for one man's use for a month. It is not an essential oil, like citronella, but a synthetic organic compound. In barracks, the "health bomb" can be depended on to destroy all insect life in a space of one hundred and fifty thousand cubic feet.

The difficulty of protecting troops against malaria lies in the fact that each man must take care of himself. "Suppressors" are administered to all troops at regular intervals. These drugs serve to keep the disease in a dormant phase. During rest periods, suppressant drugs are suspended in order to discover and treat such cases of malaria as may have been contracted. However, if proper precautions are taken, suppressant drugs are not necessary, it was stated on behalf of the Surgeon General's Office. A trip by a medical commissioner to the highly infectious Central Africa region was cited. The medical commission used the devices made available to all the men, took no drugs, and returned with an absolutely clean bill of health and no malaria.

Vegetable Drug Production

As may be well understood, the importing of drugs into Britain is difficult and the entry of many is impossible. Thus British medical men must depend upon makeshift with those which they can conveniently lay their hands on. With this object in view, a committee of nineteen has been appointed by the British Ministry of Health to "consider the steps which should be taken to secure organization of cultivation and collection" of vegetable drugs. This committee, as noted in *Lancet*, June 21, 1941, did not advocate the institution of a long term policy of vegetable drug production within the British Empire at the present time, but thought that the cultivation of short term drugs was to be encouraged as supplies could be created rapidly and growers could recoup themselves adequately during the war. Useful advice was given as to the climates and soils suitable for the various drugs. With regard to Britain itself, the committee specified the following drugs as most worthy of attention: Agar, belladonna, colchicum, dandelion root, dill, ergot, foxglove, hyoscyamus, Irish moss, licorice root, male fern, peppermint, psyllium, sphagnum moss, stramonium and valerian. Most of these are effective in the treatment of certain diseases and complaints, while only a few are dangerous.

New Germ Killers

Paul Ehrlich, in innumerable tests, sought for the "magic bullet" that would destroy bacteria directly without harming the patient. He did not succeed. The discovery of the sulfa drugs provided a new approach to chemotherapy. These drugs, according to a description of them given by Dr. Gustav J. Martin, of the Warner Institute for Therapeutic Research, New York City, at a meeting of the American Chemical Society, act indirectly by surrounding the bacteria with a "chemical magic wall" which makes it impossible for the bacteria to obtain a food substance vital for their growth. Thus weakened, the bacteria are wiped out by the leucocytes of the body.

New germ killing chemicals belonging to a chemical group known as acridines, Dr. Martin found, also exert their effect in an indirect way, but instead of building a chemical wall around the bacteria they produce a "chemical vacuum" in which the germs are deprived of oxygen. Whereas the sulfa drugs produce starvation, the acridines cause asphyxiation for the bacteria.

Both the human body and bacteria utilize oxygen by means of vital enzyme systems, known as respiratory enzymes, which make possible chemical union between cells and the oxygen from air, water and food substances. One important group of oxygen-carrying enzymes contains the chemical constellations known as adenines. It is these adenine-containing enzyme systems, Dr. Martin found, that are interfered with by the acridines, and without these adenine enzymes the bacteria are literally suffocated.

Penicillin B, which was isolated by a group of workers at St. Louis University, kills bacteria in dilutions as high as one billion to one. It is even more rare than the original penicillin. In this connection, William L. Laurence reports in *The New York Times*, just as too little oxygen is bad for bacteria and man, too much oxygen is equally bad, causing the body's energy fuels to burn too fast; hence, an excess of oxygen-carrying enzymes would also be harmful to bacteria. Penicillin B, the chemical constitution of which has been found by the St. Louis University chemists to contain an important oxygen-carrying group, acts in exactly the opposite manner from that of the acridines. Instead of depriving bacteria of oxygen, it surrounds them with too much

oxygen, in the form of hydrogen peroxide. This results in literally "burning" the bacteria alive.

Thus, Laurence says, these new studies of the acridines provide two highly important strategic highways for storming the citadel of disease-producing bacteria. One is to synthesize new members of the acridine family, more potent than those now in existence, to deprive the bacteria of vital oxygen. The other would be to create substances that would produce the same effect as penicillin B, namely, supercarriers of oxygen.

News Items

Harvey Lecture.—The third Harvey Lecture was delivered at the New York Academy of Medicine on Thursday evening, December 16th, by Dr. John Howard Mueller, professor of bacteriology and immunology, Harvard Medical School, Boston. His subject was "Nutrition of the Single Cell; Its Applications in Medical Bacteriology".

Association for the Advancement of Psychoanalysis.—At a meeting of this association, held at the New York Academy of Medicine on December 15th, Dr. Alexander Reid Martin, of New York, read the paper of the evening. His subject was "A Psychoanalytical Contribution to the Study of Effort". Dr. William V. Silverberg opened the discussion.

Clinical Society of Reconstruction Hospital.—At a meeting held on December 15th Dr. Maurice Bruger read a paper on "Biochemical Changes Influencing Repair Following Trauma". A general discussion followed.

Epidemics and War.—Thomas T. Mackie, Lieutenant Colonel, Medical Corps, executive officer, Tropical and Military Medicine, Army Medical School, Washington, D. C., delivered a lecture on "Epidemics and War" at the New York Academy of Medicine, on Tuesday, December 14th. This was one of the series of lectures to the laity.

Social Hygiene Day.—Announcement is made by the American Social Hygiene Association that Social Hygiene Day will be observed on February 2d.

Medical Society of the County of New York.—At the annual meeting held on November 22d, the following officers were elected: President-elect, Dr. Kirby Dwight; first vice-president, Dr. Roy B. Henline; vice-president, Dr. Luther B. MacKenzie; secretary, Dr. B. Wallace Hamilton; assistant secretary, Dr. Beverly C. Smith; treasurer, Dr. Fenwick Beekman, and assistant treasurer, Dr. John Carroll.

The Father of American Pharmacy.—The fifth painting in the series of "Pioneers of American Medicine" was unveiled in Philadelphia on November 5th, during National Pharmacy Week. This painting was entitled "The Father of American Pharmacy", depicting William Procter, Jr. studying a formula for the standardization of drugs while at work with an assistant in his laboratory. Ivor Griffith, Ph.M., president of the American Pharmaceutical Association and president of the Philadelphia College of Pharmacy and Science, was the principal speaker at the unveiling.

Nobel Prize Dinner.—At the annual Nobel Prize dinner, which was held in New York on December 10th, more than half of the twenty-seven persons who have received Nobel Prizes attended. Among the speakers were Dr. Harold C. Urey, of Columbia University, who received the award for chemistry in 1932, and Dr. Otto Meyerhoff, of the University of Pennsylvania, who received the award for physiology and medicine in 1932.

A New Chair of Medicine at the University of Pennsylvania.—It is announced that a Frank Wister Thomas professorship of medicine will be established at the School of Medicine of the University of Pennsylvania under the will of Mrs. Maria G. B. Thomas, of Philadelphia, who died last September. The professorship will be a memorial to Mrs. Thomas' husband, Dr. Frank W. Thomas, who died several years ago.

New York Academy of Medicine.—The annual meeting of the New York Academy of Medicine was held Thursday evening, January 6th. The scientific program was provided by the Section of Surgery and consisted of a discussion of the use of plasma and plasma substitutes, including the treatment of burns. Dr. Robert F. Loeb, Lambert professor of medicine, College of Physicians and Surgeons, Columbia University, read a paper on plasma and plasma substitutes, and Dr. Allen O. Whipple, professor of surgery, College of Physicians and Surgeons, read a paper on the treatment of burns.

Liberty Ship Named for Banting.—The Liberty ship, *Frederick Banting,* named in honor of the co-discoverer of insulin, was launched on December 20th. Dr. H. J. Cody, president of the University of Toronto, described the ship as "an outward and visible sign of unity of aim, of idea, of heart and effort among the United Nations". Dr. Banting, who was killed in an airplane accident over Newfoundland in 1941, received the Nobel prize in medicine in 1923, together with J. J. R. MacLeod, for his work on insulin. He was also credited with the invention of a device to free mine air of silica dust, aiding in the conquest of silicosis.

Friday Afternoon Lectures.—Lectures in this series will be given at the New York Academy of Medicine during January and February as follows:

Dr. David P. Barr, Recent Advances in Drug Therapy, January 7th.

Dr. Homer F. Swift, Rheumatic Fever, January 14th.

Dr. Philip D. Wilson, The Modern Conception of the Surgery of Amputation, January 21st.

Dr. George T. Pack, L. Duncan Bulkley Lecture, Cancer of the Stomach, January 28th.

Dr. Donovan J. McCune, Dwarfism, February 4th.

Dr. Joseph H. Globus, Cerebrovascular Accident, February 18th.

Dr. Alexander Randall, Recent Advances in Knowledge Relating to the Formation, Recognition, and Treatment of Kidney Calculi, February 25th.

Wartime Medicine in the Soviet Union.—A forum on "Wartime Medicine in the Soviet Union" was held in New York on December 16th, under the auspices of the Russian War Relief Physicians Committee, the North Bronx Medical Society, and the American-Soviet Medical Society. The speakers included Professor Vladimir Lebedenko, representative of the Red Cross and Red Crescent of the U.S.S.R. in the United States, and Dr. Gregory Zilboorg. An interesting feature of the program was the showing of motion pictures on "Experiments in the Revival of Organisms".

New England Society of Physical Medicine.—At the December 15th meeting of this society Dr. Howard Moore, chief of the orthopedic service of the Newton (Mass.) Hospital, was the principal speaker. His subject was "Observations Regarding Common Foot Conditions, Their Prevention and Treatment", which was illustrated with motion pictures. At the January 19th meeting Dr. Herman A. Osgoode, of Boston, will be the principal speaker, and his subject will be cancer. On February 16th, the subject for discussion will be the ultraviolet rays and Dr. Franklin P. Lowry will be the principal speaker.

Painful Diseases of the Spine.—At a stated meeting of the New York Academy of Medicine held on Thursday evening, December 2d, the program was devoted to a discussion of the diagnosis and treatment of painful diseases of the spine. Dr. Ralph K. Ghormley, professor of orthopedic surgery, The Mayo Foundation, Graduate School, University of Minnesota, read a paper on differential diagnosis and treatment, including nonsurgical therapy, of conditions causing low back pain. Roy Glenwood Spurling, Lieutenant Colonel, M.C., A.U.S., chief of the neurosurgical section of the Walter Reed General Hospital, read a paper on the diagnosis of prolapsed nucleus pulposus, with indications for surgical therapy. A general discussion followed.

Russian War Relief.—The Board of Directors of Russian War Relief have adopted a twenty-one million dollar relief program for 1944 which represents an expansion of nearly one-third over the 1943 program. War relief goods valued at nearly $10,250,000 were shipped to the Soviet Union during the first ten months of the year and the figure for the entire year is expected to reach sixteen million dollars. The 1944 program includes purchases made possible by a nine million dollar allocation anticipated from the National War Fund, and gifts in kind expected to reach twelve thousand dollars. Medical supplies and clothing will comprise the bulk of purchased goods.

Scientific Study and Development in Physical Medicine.—The first center for the scientific study and development of physical medicine as a branch of medical practice has been established at the Graduate School of Medicine of the University of Pennsylvania, Philadelphia. This was announced by Basil O'Connor, president of the National Foundation for Infantile Paralysis. To set up this center, the foundation has made a grant for a five-year period from January 1, 1944 to December 31, 1948. Mr. O'Connor explained that only a few schools or departments connected with any of the medical training centers are equipped to explore thoroughly on a sound scientific basis the possibilities of physical medicine. This newly established center for research in physical medicine will include: A center for development of physical medicine as a scientific part of the practice of medicine; a training center for medical leaders and teachers in this branch of medicine; a school for training technical workers under the guidance of such professional and scientific leadership, such a school to be only incidental to and dependent upon the first two purposes. The departments of anatomy, physiology, pathology and other basic sciences of the university will cooperate in this proposed program. The general direction will be assigned to Dr. Robin C. Buerki, dean of the Graduate School of Medicine.

Clinical Research Forum.—The New York Academy of Medicine will hold a meeting in the first week of April to provide a forum in which research workers of New York City and vicinity may present results of original research in clinical medicine. This meeting is being arranged by the Committee on Medical Education of the Academy in view of the dearth of meetings of national medical societies before which research work has usually been presented.

Presentations will be limited to twelve minutes. A brief period of free discussion will follow each presentation. The publication of presentations is not a necessary condition but the Academy plans to publish in the *Bulletin*, abstracts of presentations if the author so desires. The fact that material has in substance or in part been presented elsewhere will not be regarded as a bar to presentation, provided that the work represents recent research.

The Committee extends an invitation to all research workers of Greater New York City and of neighboring cities within a radius of one hundred miles to submit an abstract, not to exceed two hundred words in length, of proposed presentation to the Secretary of the Committee on Medical Education of the Academy not later than March 1, 1944. A formal invitation will then be extended by the Committee to the authors of papers selected for presentation to participate.

Personal.—Major General James C. Magee, Medical Corps, United States Army, retired, has been named executive officer of the information service of the division of medical sciences of the National Research Council. Major Magee assumed office on December 1st.

Dr. Donald B. Armstrong, third vice-president of the Metropolitan Life Insurance Company, has been named chairman of the newly appointed Advisory Committee on Health Education of the New York City Health Department.

Dr. Walter S. Maclay discussed the treatment of war neurosis at a meeting held in Brooklyn on Monday evening, January 3d. This meeting was sponsored by the Kings County Medical Society, the Brooklyn Chapter of the American Red Cross and the Brooklyn Council for Social Planning. Dr. Maclay, now in the United States at the invitation of the American Psychiatric Association is medical superintendent of the Mill Hill Emergency Hospital in London.

Dr. Dean A. Clark, surgeon, U. S. Public Health Service, has been appointed chief medical officer of the Office of Vocational Rehabilitation to take charge of the newly established Physical Rehabilitation Section.

Dr. Stuart Mudd, professor of bacteriology at the University of Pennsylvania School of Medicine, delivered a lecture on "Clues Regarding the Structure and Organization of the Simplest Living Systems" at a meeting of the Theobald Smith Society, held in Philadelphia on December 2d.

Dr. William C. Black, professor of pathology at the University of Colorado School of Medicine, is now in Central America, taking one of the courses in tropical medicine given under the auspices of the Association of American Medical Colleges.

Dr. Willard C. Rappleye, dean of the College of Physicians and Surgeons, Columbia University, has been appointed to the Advisory Committee on Education of the National Association for the Prevention of Blindness.

From the Ground Up

(Continued from page 28)

of food necessary for health maintenance, prepared vitamins are a boon. They are filling a need today among our fighting men of all services who may be so situated in the course of the war that it is impossible for them to secure adequate nourishment. The same holds true for countries whose lands have been impoverished by war. But a veritable "vitaminphobia" has taken hold of our people in their normal course of living, effectively aroused and enhanced by sensational advertisements, backed by gigantic interests.

In a letter to the physicians of the United States, the Committee on Food and Nutrition of the National Research Council stated in its summary: "... The use of whole wheat bread and of butter should be encouraged by vigorous educational effort ... The use of iodized salt is also to be emphasized ... Nutritious food may well determine the effectiveness of the national defence."

The late Sir William Arbuthnot Lane, as well as Sir Bruce Bruce-Porter and I, arriving independently at our opinion, have advocated for years the necessity of using whole wheat bread and whole grain, and have emphasized the harmful effects of white bread, polished rice and the like. It was a source of great interest and satisfaction to me to read last year that in Great Britain, as a health measure, a law had been passed prohibiting the use of white flour in the baking of bread. For many years I have advised all my patients to use iodized salt for the table and for cooking. In some of our States it is against the law to sell salt that is not iodized, and certain cities even add iodine to their public water supply.

The simple foods are those rich in the elements essential to health, i.e., milk, eggs, fresh vegetables, fruits, whole grain cereals, meat and fish. Therefore, good nutrition does not require unusual foods, containing sauces, condiments or specially prepared flavorings. In fact, the United States Public Health Service reported that the normal adult who ate, daily, portions of two raw vegetables, two raw fruits, a pint of milk or its equivalent, one helping of meat, one pat of butter, with salt to flavor, obtained the necessary vitamins.

All the foregoing leads up to the fact that our health depends upon the soil, for "man is built from the ground up". Conservation of life is dependent upon the nutrient quality—fertility—of the soil. There is a relation of the mineral content of the soil to the peoples and animals which feed from its products. Certain of our states find difficulty in raising and breeding cattle of the first quality, not so much because of any climatic conditions, but because of certain mineral deficiencies in the soil which directly affect the nourishment of the vegetation. In the State of Texas there is a county in which almost every inhabitant has perfect teeth, and this is accounted for by the fact that the soil itself has almost the exact combination of phosphorus and calcium needed for good teeth. It is interesting that in the State of Ohio there is a county in which the inhabitants of one half, it is reported, have perfect teeth, and those of the other half have constant dental troubles. Investigations showed that the difference in the teeth and bone structure had a direct relation to the differences in the soil of the two parts of the country.

It has been suggested that behavior problems in children may even be due in part to calcium deficiency in their growing bodies.

"Man in everything will err, yet an innate longing desire draws the aspiring mind gently towards the truth." We are today reaping the benefit of the efforts of those aspiring minds who have given us a broader concept of Nature's bounty ... in providing for the needs of the body. Man may supplement or try to imitate what Nature so gratuitously offers, but seldom equals her gifts. A clearer understanding is growing of the value of natural foods, and that understanding bodes well as we look forward to the building of a better and fuller world to tomorrow.

A Tribute to Sir Arbuthnot Lane

May I express my appreciation of that great leader and surgeon, Sir William Arbuthnot Lane. His dextrous surgery and meticulous attention to the finest details of asepsis left nothing to be desired. I wonder how many of his confrères realize how great a pioneer he was. He was the first to use metal plates in fractures; the first to tie off the internal jugular vein for sinus thrombosis; the first to take out a rib for empyema; the first to massage the human heart through an abdominal incision and renew its function successfully in a case where the pulse and respiration had absolutely ceased during an operation; the first to introduce saline solution into the vessels of a human being; and the first to emphasize the dire effects of prolonged intestinal toxemia and to recognize certain intestinal abnormalities that demand attention in order that the plumbing plant of the human house have adequate elimination, just as it was necessary to have a proper sanitary plant in a house of brick and mortar. He was also the first in Great Britain to perform a radical mastoid operation.

These, briefly, are Lane's great contributions to surgery. Controversy has bulged large on the horizon of his endeavors, but already he is beginning to receive that credit which should be his, for he contributed the most to surgery in our time.

34 GRAMERCY PARK

Ice As a Local Anesthetic

HALLEY H. FRIEDERWITZER
Bronx, N. Y.

There are times when simple things are prone to be disregarded when searching for more complicated formulas or structures. In the endeavor to relieve human beings of their pains, anesthetics have been devised galore, but mostly for hospital use or in complicated cases. When surgical intervention is necessary on a patient who has a socalled minor condition, and this occurs at the patient's home or even at the office, I have found simple ice to be an excellent anesthetic. There are *no* contraindications to ice as an anesthetic.

First, I should like to explain the physiological mode of action of ice as an anesthetic and its concomitant problems. Whether or not the area is infected, ice is an indicated anesthetic that does not tend to spread infection. Its first action of cold causes an ischemia of the area involved. This immediately prevents a spread of the infection, as well as causing a freezing and thereby an anesthesia of the nerve endings, whose sensitive points are generally very near the external layers of the epidermis. The localized area becomes somewhat

coagulated and lumpy and is now ready for surgery, which lasts up to fifteen to twenty minutes, depending, naturally, upon the amount of time the ice has been in contact with the area involved.

For home use, or emergencies, or when the area is badly infected and an injection of novocaine is unwise, or where ethyl chloride causes too much pain because of its burning sensations, ice is the method of choice for anesthesia.

I have found ice to be useful in the following types of cases:

1. Infected toenails: Keep ice in sterile gauze to a previously sterilized skin for twenty minutes.
2. Carbuncle or boil: Ice works best in these cases; keep ice on area for twenty minutes.
3. Paronychia: Keep ice on for ten minutes.
4. Dislocations of wrists, fingers, and elbow: Keep ice on area with a little pressure, for twenty to thirty minutes.
5. Abscesses anywhere on or near the skin surface: Keep ice on area between fifteen and twenty minutes.
6. Skin growths (nevi and the like): Keep ice on area for ten minutes and remove growth by knife or cautery.

In conclusion, let me state that ice is a good local anesthetic in selected but abundant cases, and extremely useful in emergencies, as well as being simple. More thought on the subject will increase the uses of ice as a safe, simple and practical local anesthetic.

2080 Grand Avenue

Hair

HERMAN GOODMAN
New York, N. Y.

Men and women in all walks of life, and of all ages, particularly in youth, are interested in hair. Hair in excess on unwanted places, and the lack of hair where fashion and habit expect hair to be, bring many otherwise perfectly healthy people to the consultation rooms of physicians, to beauticians, and to barber emporiums.

The removal of unwanted hair is part and parcel of medical practice and many specialists in dermatology have the equipment for removing superfluous hair through the agencies of low voltage, direct current electricity, or galvanism. Other specialists rely upon a variant of high frequency or radio waves as the source of current in the removal of the undesired hair. Each method requires the introduction of a needle directly into the hair follicle housing the unwanted hair. The technique is exact, and the results depend upon the care exercised in entering the follicle, and the period of action of the selected current.

Exposing the skin to x rays for the permanent removal of unwanted hair is not only quackery, it is dangerous to the ultimate well being of the individual. To remove hair by x rays requires radiation sufficient to destroy tissue, and this destruction tends to cause disfiguring blemishes far more unsightly than the hair. An ethical medical practitioner advises against x ray exposure for the permanent removal of unwanted hair as a cosmetic measure.

The temporary removal of unwanted hair may be attained through physical means, such as the razor, pumice stone, or actual plucking; through chemical means, such as the malodorous sulphides; and more recently, by available nonodorous depilatories. The hair continues to grow, and means for removing the hair above the skin surface must be resorted to at intervals.

But alas and alack, there is little one can do to restore loss of hair. The hair has been lost because of local or general systemic disorders. In some instances, the cause is not determined, and it is not determinable with our present modes of examination. Some loss of hair is symptomatic, a sign of illness; other loss of hair defies explanation. Many persons have complete restoration of lost hair because the vital strand within the hair follicle has not been destroyed. In other cases the lost hair is never restored despite every and all methods advocated by physicians, dermatologists, barbers, miscalled hair-growing specialists, or hairdressers. The vital strand has been destroyed, and nothing now known to witches or men of science can replace it!

No one explanation, no series of explanations, suffices for loss of hair. Every possibility has been explored. Many more will be studied. The interrelationship of the glands of internal secretion responsible for the individuality of the person, or the personality of the individual, offers the most fruitful source of study at the moment. Men lose their hair in a different pattern than women. That is a clue worth following, and one that is being followed. According to present indications, loss of hair of the scalp in a pattern of the capital letter M, encroachment of the scalp hair at the two points over the eyes, and at the pate is caused by activities of the male hormones. So far, the administration of male hormones after the loss of hair has become established has been without favorable result in men. The prevention of further loss of hair seems more promising in early or incipient pattern male baldness.

Until a working specific is found, most persons with loss of hair must be content to get along without it, or with attempts at restoration by the application of counterirritants, including massage. Those in occupations requiring the semblance of youth should learn to wear wigs, or if it be vanity alone, to wear wigs with increasing length of hair. After the fourth change, the possessor of the wigs may glide his hands over the longer locks, and say to his family or his secretary, "time to have a hair cut", and revert to wig number one with the short hair.

The hair on the bearded face requires removal, according to present day standards. War, however, may make beards popular again. Shaving is a self-mutilating job, for the most part. It may be made less gruesome, if the old adage, "well lathered is half shaved", be recalled and its lesson applied. Simple lathering soaps, special brushless shaving creams, and other applications prior to shaving with steel, are available for experimentation and experience by the individual. The old fashioned straight, jack or barber razor is advised. Its daily use and the care, preservation and restoration of its keen edge are morale building. To make men of boys there is nothing so simple as the casualness of the daily shave with a four inch blade of razor edge sharpness. Lessons may yet be learned, and the word "safety" be removed from the language (with the word "defense") as the need for men becomes urgent. Certainly, the soldier should be willing to face the jack razor, as he applies the jack razor to his face!

Hair and hairiness, and the removal of unwanted hair, are absorbing problems in our daily lives as individuals, in our very mode of facing the ways of life.

Book Reviews

Autobiography of a Surgeon

A Surgeon's World. An Autobiography by MAX THOREK, M.D. Philadelphia and New York: J. B. Lippincott Company, 1943. Pp. 410. Price $3.75.

Dr. Max Thorek has written his autobiography. It gives a fascinating outline of his life, his hobbies, his successes, his failures, and his philosophy. Few men have had so rich a life as Max Thorek. His childhood was spent in a Hungarian village where he met his wife, who later joined him in this country and has been his helpmate and comrade ever since.

He tells how his parents both followed the profession of ministering to the sick and how the persecution of the Jews caused his family to migrate to this country while he was still a young man. He tells of his disappointments, his early life in the workers' district of Chicago, of his endeavor to pay his way through medical school with his violin but ending up as a snare drummer. He gives brief but human interest stories of his patients among the working classes of the city—patients of all nationalities and religions—of his struggles in building a hospital, of his final success, and loss of most of his acquired savings in the crash of 1929, of how he turned to photography as a hobby, but he modestly refrains from telling how many prizes he has won with his excellent photographic exhibits throughout the world. He tells of his struggles in founding the International College of Surgeons and the black days that met him as he was trying to build the organization on a sound foundation. There is a lot more in the book. He finally tells of the conclusions he has reached in relation to life and death and the soul.

One gets to know Thorek better after reading the book. He writes as he talks: keenly, with warmth, poetically, and with a genuine sympathy and understanding for all people. One sees this revealed in his surgical work, in his photography, in his music, in the many true friends he has made, and in his home life.

We know of no one person who has led such a vigorous, versatile, and well-rounded life as has Max Thorek. His surgery is outstanding; he has devised new technical operative procedures for gallbladder surgery which have saved many, many lives. He has been keenly interested in research in any field which might improve techniques or treatment. He has brought happiness to countless persons, not alone through his ministrations to the sick but through his kindness and appreciation of humans. His kindness is not limited to words but fulfilled by deeds. He has not made the mistake that so many scientists have in becoming paranoid in one particular field of endeavor. He has delved into men, medicine, and music, and welded them all into a symphony which is reflected in his life and which has brought benefit to so many.

We happen to know that Thorek has left out a great deal in this autobiography. To some the writing may appear in spots as egotistical and yet we who know him feel that he has understated rather than overstated his ability and his place in surgery and in the community. We have always felt it a delight and privilege to know Dr. Thorek and are grateful for this book for it has given us a chance to know him better.

Nervousness and the Digestive Tract

Nervousness, Indigestion, and Pain. By WALTER C. ALVAREZ, M.D., professor of medicine, University of Minnesota (The Mayo Foundation); consultant in the division of medicine, The Mayo Clinic, Rochester, Minn. New York and London: Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 1943. Pp. 488. Price $5.00.

It is always a pleasure to read anything that Alvarez writes whether you agree with him or not. Basically, we happen to agree with him. He has gained fame for what he knows about the gastrointestinal tract but we would be impelled to give him greater praise for what he knows about the human being. For him, the gastrointestinal tract still belongs to, and is an integral part of, the human being who makes use of it, and this we believe to be the crux of this book as well as of any article that Alvarez may write.

He starts out with an attempt to evaluate what the emotions can do to affect the digestive tract; and as we all know, the answer is, plenty. He then goes on to the necessity for making a diagnosis by knowing all there is to know or all that can be found out about the patient: about his fears, why he came to the doctor, how the history is told. He goes on to tell what observations must be made in dealing with the patient, the plans that must be made in the examination, how the nervous patient should be handled, how to avoid being misled by previous diagnoses, how truthful one must be with patients. Later in the book Alvarez goes on to divide and treat the various ailments that may come under the observation of the physician. We have the chronic dyspeptics, the neurotics, the psychotics, menopausal disturbances, and a dozen other symptomatic conditions.

It is a good book, sound in its logic, and one which we are certain most physicians will enjoy and find profitable.

Geriatrics

Geriatric Medicine. Diagnosis and Management of Disease in the Aging and in the Aged. Edited by EDWARD J. STIEGLITZ, M.S., M.D., F.A.C.P., consultant in gerontology, National Institute of Health. Illustrated. Philadelphia and London: W. B. Saunders Company, 1943. Pp. 887. Price $10.00.

Although the editor of this excellent book is Dr. E. J. Stieglitz, of Washington, D. C., fifty authors have contributed chapters to it. The foreword was written by Dr. Lewellys F. Barker, who died in Baltimore on July 13, 1943 at the age of seventy-six, an apostle and an exemplar of "growing old gracefully".

The word geriatrics was probably coined by the late Dr. I. L. Nascher who published the first book on this subject in 1909, with a preface by the late Dr. Abraham Jacobi, a pediatrician, then ninety years of age! (Geriatrics is made of two Greek words, *geron,* old man, and *iatrikos,* medical treatment.) And so it is only some thirty-five years since anybody began to care about the diseases and infirmities of the person past middle life, medically speaking. Old age is still despised by some younger men who have not advanced mentally and socially as far as they ought to have done. Recently, it was stated in a newspaper (*New York Times*) that medical teaching is suffering because all capable teachers (presumably those below middle life) have gone to war, and, therefore, teaching has been left in the hands of old men (presumably incompetent.) Shades of Jonathan Hutchinson, Osler and a whole host of pedagogic forbears! There seem to be certain other causes for

alarm too, since the span of life is lengthening so rapidly; for it is stated that in 1983 we shall have in the United States twice as many persons over sixty-five as at present—there are nine millions now!

This book places emphasis upon the prevention of diseases incident to old age, rather than "cure"; on euthenics; on the management of senescence rather than senility. We must find out how to use the skills and experience of oldsters, and defeat "defeatism". To be "laid on the shelf" and to be held worthless to society, to be lonely, without friends, are all factors in producing melancholia, even suicide. Professor John Dewey has said that industrial development in a machine age has "put a premium on youthful vigor, and a discount upon the experience of those who are older". This need not be so, and must not be so if the world is to progress in its cultural and racial and more permanent elements.

Diseases of youth are largely infectious and communicable; those of "age" are degenerative and largely preventable if "health surveys" of an individual are to mean anything. Geriatrics is the practice of medicine in the aging, those past forty, and is an all-inclusive term. To study this book is to take a "refresher course" in general medicine of very great value to every doctor.

Critique

Scientist Fools Himself

Some years ago a Department of Agriculture scientist, investigating the effects of electricity on plant growth, became human in the introduction to his paper and said that, "Most of the new methods that are proposed draw their energy from the air utilizing the atmospheric gradient. None of these has succeeded in other hands than those of the originator, and inventions claiming to increase plant growth by utilizing the atmospheric gradient may properly be classed with water witches, sex determiners, and perpetual motion machines." One investigator claimed to have proved that potted plants grew more rapidly if the soil in the pot was connected with the earth by a wire, but no other investigator could duplicate his results. This material was all deleted from the scientist's paper by a superhuman technical editor; a dehumanized revision took place to render the paper dry, abstract, solemn, and scientifically impressive, as levity is frowned upon by scientific editors as a matter of tradition.

However, the results of the Department investigator were themselves of interest. He tried experiments and it appeared mathematically established that electricity did stimulate plant growth; at least the statistical odds were 1:100 that it did, and that seemed conclusive. But the scientist then shifted the boxes in which he had grown his plants into groups arranged merely in accord with the numbers that happened to have been stenciled on them; then, regardless of electrical treatment or its lack, he discovered he could work out a mathematical correlation between this wholly irrelevant (it then seemed) factor and plant growth, which was still more striking than that between the growth and actual electrical treatments.

Again the odds were 1:100 at least, showing how aptly a seemingly irrelevant fact may fool the scientist and completely invalidate what appears to be a fully established scientific conclusion. The measurement used was the height of plants, seeded at the same time, and a comparison between those that did and those that did not get the benefit of electrical current. But the worker kept testing his results until he discovered that certain of the boxes in which the plants were grown had a deleterious effect on plant growth. By what appeared to be pure chance the odd-numbered boxes worked better than the even-numbered ones.

This conclusion was so ghastly that the scientist went further only to find that the former boxes were made out of a kind of wood which held moisture better than the wood used in making the latter, and that this difference in moisture-retaining ability accounted for his results. But, as he said, and this is good to remember: "Taken at their indicated value, it would be necessary to conclude that the numbers that happened to be stenciled on the boxes in which the seedlings were grown had influenced the rate of growth more than did the electrical treatment." Can you tie that?

Food and Intelligence

In the *New York Times,* March 18, 1929, it was stated that Dr. John Munroe, of Long Island University, had been studying the "schism between heredity and environment" for sixteen years, had tested and retested five thousand school children and followed seven hundred of them through school and college and into business life, and was convinced that poor food was directly responsible for much of the low intelligence among laboring classes. He held that intelligence was not constant, but varied from time to time, and was adversely affected by vicious food conditions, bad sanitation and hygiene, and brutality in the home. His tests were said to have begun in Faribault, Minn., in 1913. Dr. Frederick Kuhlman of the Minnesota State Board of Control and members of his staff collaborated. Kuhlman-Binet methods were used. Dr. Munroe said he had performed food tests on ten children from families where a high degree of intelligence would be expected but that feeding eggnogs twice a day to these kids increased their intelligence ratings. He also found that ninety-five percent of his subjects who had turned out to be criminals had low-grade intellects aggravated by bad surroundings and poor food. This study assumes enhanced importance while we are engaged in a great Food Fights For Freedom program designed to make us produce, preserve, conserve, share, and use food wisely.

But does anyone know anything more about these studies of Dr. Munroe?

The Critic has never been able to trace them further, or to discover where they were published professionally. Does anybody know? If so, will they write in?

"Acid Mouth"

If you are interested in the more or less esoteric subject of the acid mouth and the manner in which certain dentifrices were supposed to cure it, look up an editorial in the *Journal of the American Medical Association* for March 16, 1929, entitled "A Biochemical View of 'Acid Mouth' ".

THE CRITIC

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JANUARY 1944

Medicolegal Notes

Refusal of Operation by Compensation Claimant

Claim was made by an employee under the Illinois Workmen's Compensation Act for additional compensation and allowance for medical care. The injury was a fracture of the femur about the juncture of the lower with the middle right, sustained January 21, 1931. The State Circuit Court affirmed a decision of the Industrial Commission denying the application. The Circuit Court's judgment has now been affirmed in part and reversed in part by the Illinois Supreme Court, Florczak v. Industrial Commission, 44 N. E. 2d 836.

The evidence of many expert medical witnesses on the hearings before the commission and the arbitrator appointed in the case was exhaustively reviewed by the Supreme Court in its opinion, but the essential facts appear in the court's statement of its reasons for its decision.

The first question was as to plaintiff's claim for further hospital, medical and surgical care. Under the provision of the Illinois Act, liability of the employer to furnish such care, after first aid has been furnished, is limited to that which is reasonably required to cure or relieve the effects of the injury. In this case plaintiff conceded he received all the first aid to which he was entitled under the statutory provision. His evidence indicated that the necessity for further hospital, surgical and medical care was for the purpose of furnishing relief from the effects of the injury rather than with the hope to effect a cure.

The Industrial Commission found that necessary first aid had been provided and that no liability rested on the employer to furnish more, but this conclusion appeared to be based on the Commission's opinion that the claimant's refusal to accept an operation, the amputation of his left leg at the thigh, barred any further claim for further hospital, medical or surgical care. The employer continued to pay weekly compnsation for four years after the offer of compensation.

The medical experts agreed that the amputation of the leg was a major operation. The employer's experts testified that the claimant's sole disability was then confined to the loss of the use of the leg. If this was so, the court said, it proved there could have been little or no necessity for the amputation.

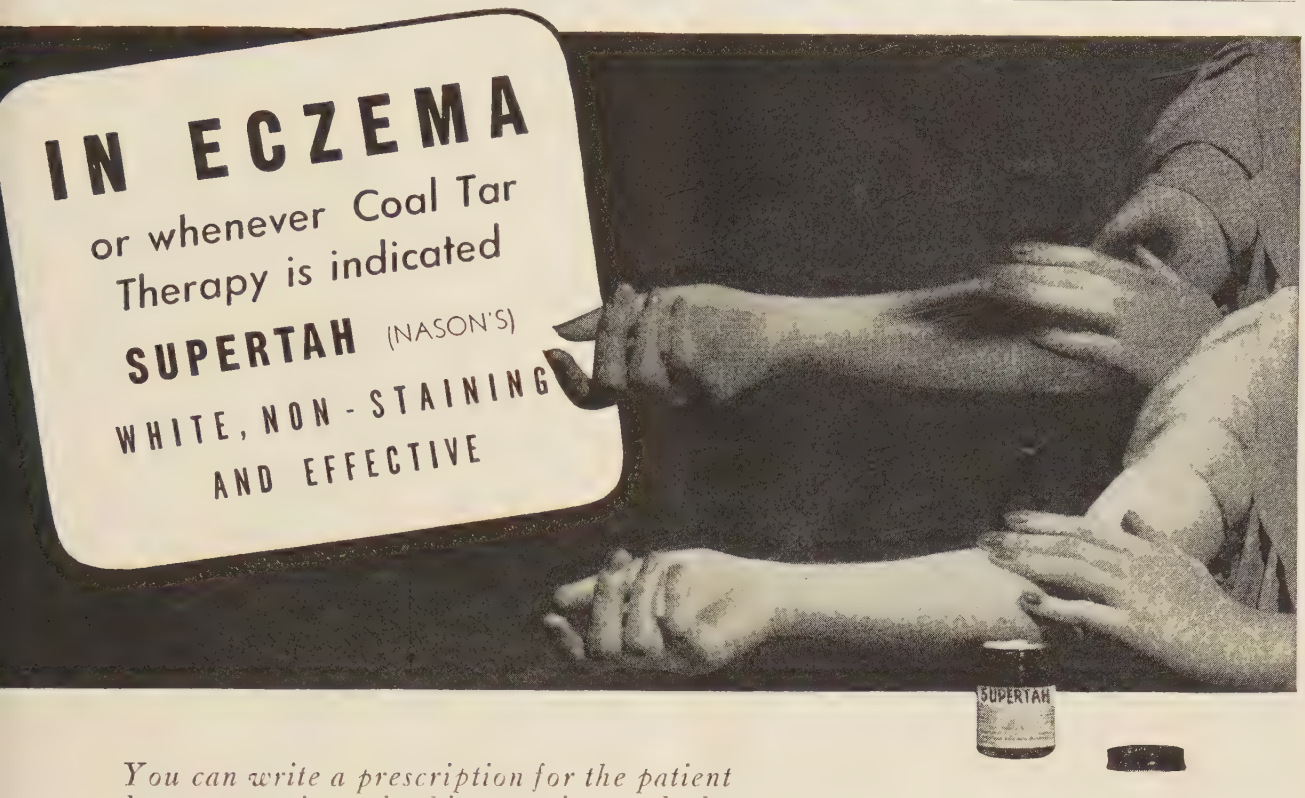
Cases concerning minor operation or treatment the court rejected as not controlling in a case involving a major operation. A majority of the courts of review in other jurisdictions, the court said, have adopted the rule that where the operation tendered is of a major character and attended with serious risk to life or member, an injured employee's refusal to submit thereto is not unreasonable, and compensation should not be denied on that account. Citing decisions in Oklahoma, Oregon and Michigan and the annotations in 73 A. L. R. 1307 and 105 A. L. R. 1476. This rule the Illinois court regards as supported by the better reasoning and in accord with what the Illinois Supreme Court has declared the purpose of the Workmen's Compensation Act to be and the remedies the legislature intended to cover. The lower court's judgment was therefore reversed so far as it affirmed the finding of the Commission that plaintiff was barred from receiving additional hospital, medical and surgical treatment because of his refusal to submit to the operation that was tendered him.

Insufficient Evidence of Malpractice

In an action for alleged malpractice in the treatment of varicose veins, for damages to compensate for injuries sustained consequent upon an operation, it was held that the plaintiff adduced insufficient evidence of neglect upon the part of the surgeon in using a recognized technique, of severing the vein and injecting an irritant solution into it by means of a cannula, to make the case one for the jury. A directed verdict for defendant was affirmed and a motion for a new trial held properly denied. Simon vs. Larson, Minnesota Supreme Court, 298 N. W. 38.

Appeal from Revocation of License Must Be Made in Time

Where a drugless healing practitioner's license to practice medicine was cancelled and revoked for unprofessional conduct in violation of the federal narcotic statute, the Washington Supreme Court, Dale vs. Cohn, 127 P. 2d 412, denied a complaint filed by the licensee to have the revocation set aside because the plaintiff had failed to appeal timely from the order, so that there was no basis for relief in equity against the order.



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Oral Prophylaxis Against Upper Respiratory Infections

Thomas B. Herron, medical director of the Monessen and Allenport Plants of the Pittsburgh Steel Company, says that upper respiratory infections account for a large percentage of sick absenteeism and reduced productive efficiency (*Industrial Medicine,* September 1943).

In a comprehensive review of the literature relative to the development of oral immunization a number of reliable investigators have reported that good results have been obtained with orally administered bacterins in prophylaxis against respiratory infections and that statistics for more than three thousand persons and an equal number of controls who were not immunized show that the incidence of colds in the latter group was about four times greater than the number of colds that occurred in the immunized group.

It is commonly accepted that the etiological agent of the common cold is probably a virus, the identity of which has not yet been established. When a common cold is acquired, one or a combination of the following possibilities may occur: 1, the general or local resistance of the individual may be reduced; 2, the virulence of the bacterial pathogens normally present in the upper respiratory tract may increase. The severity of symptoms and the development of complications are dependent upon these two factors. Since we have not yet been provided with a prophylactic agent against the suspected virus, an attempt should be made to reinforce the individual protective mechanism against the common bacterial respiratory pathogens.

Dr. Herron presents the results obtained by Murat, Palmer, and Andes in the administration to three controlled groups of tablets containing killed organisms. In all three reports an apparent difference in the susceptibility to upper respiratory infection is noted in favor of those to whom the tablets containing the water-soluble antigenic substances were administered.

The same water-soluble antigenic substances, known as Vacagen oral cold vaccine tablets, were administered to a group of industrial workers employed in the Monessen and Allenport plants of the Pittsburgh Steel Company. These tablets contain the water-soluble antigenic fractions of pneumococcus Types 1, 2 and 3, streptococcus (nonhemolytic, hemolytic and viridans), H. influenzæ, M. catarrhalis, Staphylococcus aureus, and B. friedländer.

During the years 1941 and 1942 from the fifteenth of October to the end of March, Vacagen tablets were offered to all employees of the two plants. Of the total number of employees only 612 completed the course or met the requirements for inclusion in the report. These employees represented a fair cross-section of the personnel of two large industrial plants.

The author summarizes the results of this clinical investigation as follows: The number of individuals who reported no upper respiratory infections during medication was over four times the number of those who reported no colds prior to administration of the tablets. The number and percent, respectively, of persons who apparently developed an immunity to upper respiratory infections was 346, or 66.1 percent. The number of persons who reported improvement or a

(*Continued on page* 50)

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reduced number of upper respiratory infections during the period of administration was 115, or 22 percent. Individuals who reported no change were 38, or 7.3 percent. Persons who reported an increased incidence of upper respiratory infections were 24, or 4.6 percent. Favorable results were obtained by 461 employees, or 88.1 percent of those who completed the prophylactic course for immunization against upper respiratory infections and who reported one or more colds previous to medication. Analysis of the data obtained on a special group of 74 employees, who completed the course for two consecutive years, indicates that the oral cold vaccine tablets are particularly effective in providing protective immunity for persons especially susceptible to upper respiratory infections, and, further, that some degree of protective immunity extends beyond a period of twelve months. The author concludes that favorable results obtained by oral administration of water-soluble antigenic substances appear to recommend this procedure as an effective and practical method to provide prophylactic immunization against upper respiratory infections in industrial workers and other large masses of the population.

A number of factors have prevented the accurate presentation of the reduction of the number of working days lost due to upper respiratory infection, but the information accumulated in this report certainly provides sufficient evidence to recommend the continued use of Vacagen tablets (Sharp and Dohme) and to justify great additional effort to include all plant personnel in the prophylactic program directed against upper respiratory infections.

Corneal Transplantation

Richard A. Perritt (*Arch. Ophthalmol.*, July 1943) describes the evolutionary stages of the work on corneal transplanation which he has done under the auspices of Dr. Sanford R. Gifford. The techniques of outstanding contributors in this field were clinically appraised and evaluated, some being modified and others discarded.

A conjunctival flap was first used, according to the Filatov technique and discarded because the edges of the transplant had a tendency to protrude and in some cases there was so much scar tissue that it was difficult to obtain a conjunctival flap. The Thomas technique was modified so that the corneal disk of the recipient and that of the donor eye were similar in size. The Castroviejo method was reduced to its simplest terms and the Castroviejo trephine was accepted and employed. Dr. Perritt acknowledged the benefit which he had received from the workers mentioned and he believes they have succeeded in evolving a simplified technique which is less time consuming and still productive of favorable results. Dr. Perritt also describes a new corneal suture which has proved to be very efficient and satisfactory.

The sources of transplants were the eyes of living human beings freshly enucleated because of trauma or accident, severe iridocyclitis without anterior synechias, sarcoma or glaucoma. Corneas were obtained from stillborn infants and infants who had died a few hours or days after delivery because of a generalized infection. The important considerations, the author says, are that the corneal epithelium be normal, that there be no edema, blebs or vesicles, and, especially, that the en-

(Continued on page 52)

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Should tampons be worn only at the start and end of menstruation?

In 110 young nurses (another study group), 95 per cent used tampons with satisfaction all through menstruation. Only 5 per cent could not use tampons in the middle of the period, and in these cases the flow was excessive.

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Are tampons comfortable and do they help the psychological attitude toward menstruation?

The patient does not even know that a tampon is present in the vagina if it is inserted sufficiently deep. A large number of patients have voluntarily stated, without being questioned, that premenstrual and menstrual tension disappeared following the adoption of tampon hygiene.

* Karnaky, K. J.: West. Jnl. Surg Obstet. and Gyn., Vol. 51, p. 150, April 1943; condensed in Cur. Med. Dig., July 1943, p. 43.

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dothelium be normal. The author explains how eyes are preserved and what conditions are necessary to maintain their anatomical and physiological integrity.

The technique of transplantation is described with the indications and contraindications for its use. The cases were classified as those in which conditions are favorable, those in which conditions are unfavorable, and those in which transplantation is done for cosmetic effect alone. The prognosis is favorable in interstitial keratitis when the Wassermann reaction is negative and the eye "quiet"; in keratoconus, particularly those cases in which apical corneal changes are present and the patient is not aided by contact lenses; in cases of injury resulting in blood staining of the cornea, and in central circumscribed corneal leukoma without anterior synechias and with clear peripheral corneal tissue. The prognosis is less favorable in gonorrheal blennorrhea, tuberculosis and lipoid degeneration of the cornea, severe lime or acid burns, and corneal dystrophy.

In order to demonstrate specific points of interest a number of brief case histories are given which represent a series of twenty-eight corneal transplantations.

The author concludes that by the use of unselected clinical material he has been able to arrive at a clinical evaluation of eyes presenting a favorable or an unfavorable prognosis with regard to corneal transplantation, and to reach some conclusions as to the commonest causes of failure.

The nurse entered the professor's room and said softly: "It's a boy, sir."

The professor looked up. "Well, what does he want?"

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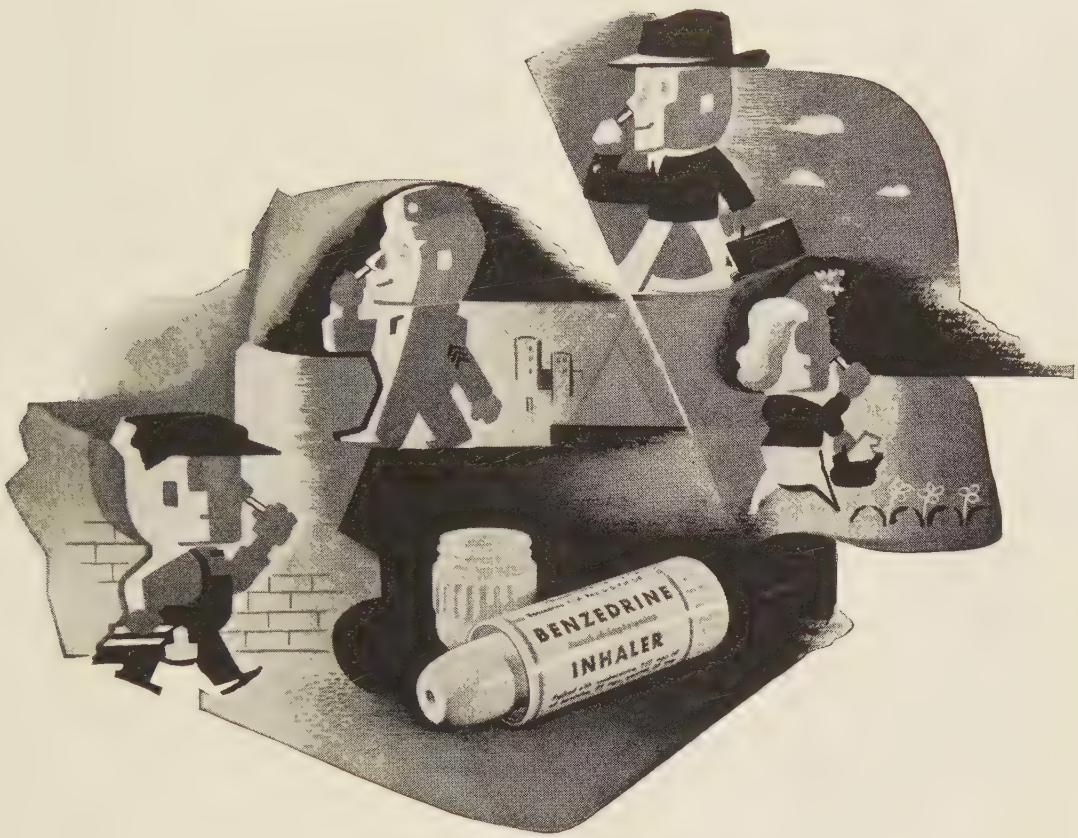

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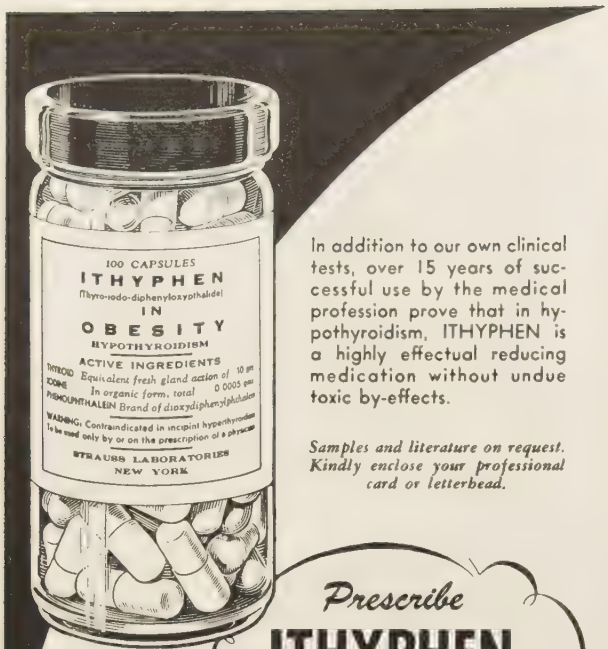

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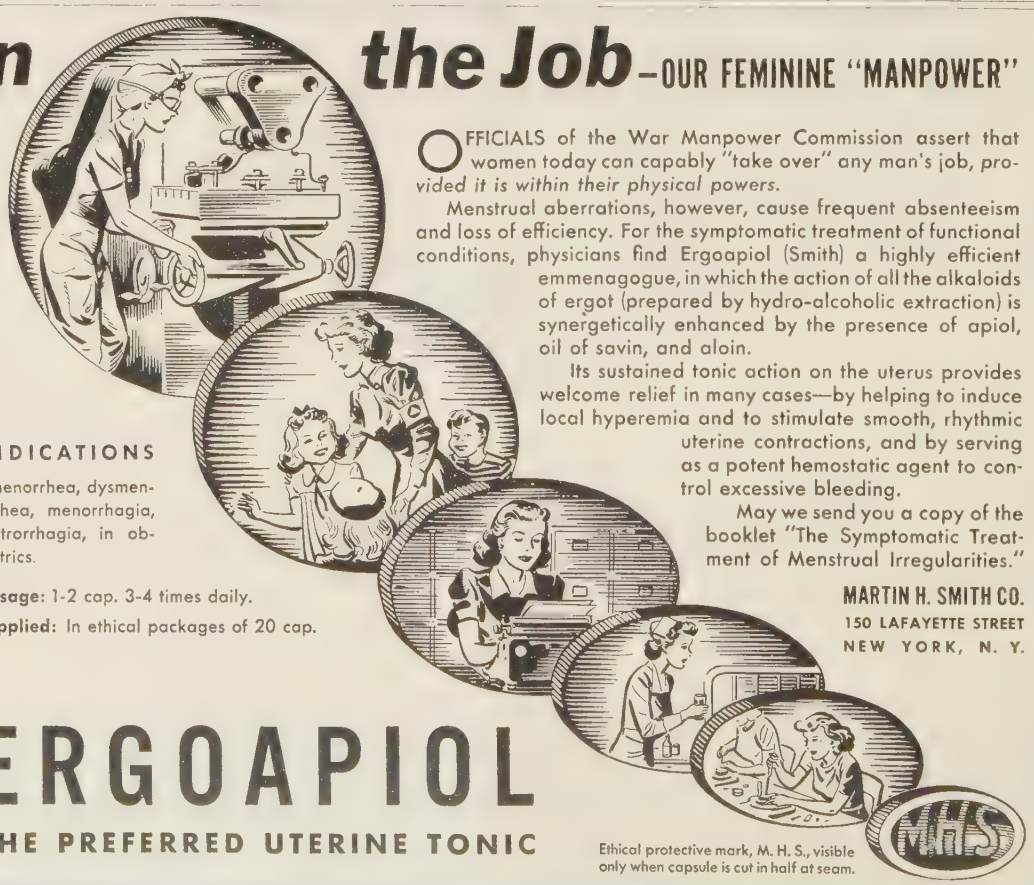
New Vitamin-Mineral Product

Hoffmann-La Roche, Inc., of Nutley, N. J., recently announced to the medical profession a new multivitamin-mineral preparation called Vitaminets. This is not "just another" multivitamin combination. Vitaminets are palatable tablets of superior merit containing *nine vitamins and five minerals*—vitamins A, B_1, B_2 B_6, C, D, and E, calcium pantothenate, niacinamide, iron, calcium, phosphorus, manganese, and magnesium. Vitaminets have a pleasant licorice flavor and, if desired, they may be chewed and swallowed like any other food. As the case with all Roche products, Vitaminets will be marketed only through professional channels and will never be advertised to the laity. Vitaminets are available in bottles of 30 and 100 tablets. A descriptive Vitaminets booklet will be furnished upon the request of a physician.

The Seven Ages of the Physician

An unusual tribute has been paid to the medical profession by Ciba Pharmaceutical Products, Inc., through Ciba's sponsorship of a series of paintings, "The Seven Ages of the Physician". The paintings which were executed by the distinguished painter, James Chapin, symbolize the idealism of the men who devote their lives to the science of healing. Each of the seven paintings represents a crucial phase in the development of the physician, from infancy to old age. The paintings were shown in Philadelphia at the convention of Military Surgeons of the United States.

On the Job—OUR FEMININE "MANPOWER"



OFFICIALS of the War Manpower Commission assert that women today can capably "take over" any man's job, *provided it is within their physical powers.*

Menstrual aberrations, however, cause frequent absenteeism and loss of efficiency. For the symptomatic treatment of functional conditions, physicians find Ergoapiol (Smith) a highly efficient emmenagogue, in which the action of all the alkaloids of ergot (prepared by hydro-alcoholic extraction) is synergetically enhanced by the presence of apiol, oil of savin, and aloin.

Its sustained tonic action on the uterus provides welcome relief in many cases—by helping to induce local hyperemia and to stimulate smooth, rhythmic uterine contractions, and by serving as a potent hemostatic agent to control excessive bleeding.

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THE SMOOTH, uncomplicated hypnotic action of 'Delvinal' Sodium vinbarbital sodium, for example, has occasionally elicited expressions of doubt as to the potency of this new barbiturate compound. 'Delvinal' Sodium is fully potent but perhaps deceptively so, because it is exceptionally free from the unpleasant side effects commonly associated with administration of sedative-hypnotic drugs.

The emotional strain of war-time living has caused a noticeable increase of functional insomnia, for the relief of which 'Delvinal' Sodium is ideally suited. A single dose of 1½ to 3 grains is generally sufficient to induce sound, refreshing sleep without "drugged" sensations during induction or "hangover" upon awakening. 'Delvinal' Sodium vinbarbital sodium is also indicated as a sedative in certain psychiatric conditions, as well as for pre-operative sedation, pre-anesthetic hypnosis, and obstetric sedation and amnesia. This remarkably efficient preparation is supplied in distinctively colored capsules of three strengths: ½ grain (brown), 1½ grains (orange), and 3 grains (orange and brown). Sharp & Dohme, Philadelphia 1, Pa.

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Foci of Infection in Systemic Diseases

The following tabulation of possible sources or causes (foci) of systemic diseases has been made by Dr. Edward C. Titus.

A. RESPIRATORY TRACT:

Oral cavity:

1. Peridontal: chronic and acute gingivitis
2. Dental: (a) apical infection; (b) dental caries; (c) residual areas
3. Oral: (a) nasopharyngitis; (b) pharyngitis; (c) laryngitis; (d) tonsillitis; (e) peritonsillar infections; (f) stomatitis; (g) glossitis.

Nasal cavities:

Nares; turbinates; sinuses: postnasal, maxillary, frontal.

Auditory apparatus:

Lower respiratory tract:

Tuberculosis and other infections of the lungs and pleura, including chronic bronchitis; subphrenic abscess.

B. GASTROINTESTINAL TRACT:

1. Stomach: (a) gastritis, achlorhydria and ulcer
2. Duodenum: duodenitis, ulcer
3. Biliary tract: (a) hepatic dysfunction, hepatitis; (b) cholecystitis, cholangitis, etc.
4. Pancreas
5. Small intestine: ileitis, regional ileitis, appendicitis
6. Colon: "colitis", diverticulitis; "intestinal intoxication"; parasites; proctitis.

C. GENITOURINARY TRACT:

(a) Kidneys, ureters; (b) bladder; (c) uterus, cervix, ovary; (d) prostate, scrotum; (e) urethra.

D. SKELETAL SYSTEM:

Muscle and bone: (a) joints, articular, periarticular; (b) "rheumatism", bursitis, myositis, etc.; (c) cold abscess of psoas muscles; (d) extremities

Skin: (a) various dermatoses; (b) umbilicus.

E. ENDOCRINE GLANDS:

(a) Pituitary; (b) thyroid; (c) adrenal; (d) gonads; (e) others.

Doctor (to applicant as secretary): "I assume you know the King's English?"

Applicant: "Of course, he is. Whoever said he wasn't?"

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Focal Infection

V. J. Kinsella, Melbourne, Australia, in a communication published in the *Medical Journal of Australia* (October 17, 1942), expresses the fear that much curable disease will remain uncured if practitioners fail to recognize the part played by focal infections, This fear, he says, is based on actual experience. He has seen many cases in which ill health persisted because of failure on the part of the doctors to recognize that grossly infected tonsils in middle-aged and elderly patients are potent factors in various disease conditions.

The author believes that every practitioner, whether physician, surgeon, or orthopedist, should be well trained in making a complete examination of every patient, in a search for possible factors which could cause deterioration of tissue. To secure this clinical overhauling it should not be necessary to send the patient to specialists. The technique of tonsil examination, he says, is quite unknown to many practitioners, and infected tonsils are not recognized because they do not appear as "great hypertrophied masses" or do not cause sore throat. To depress the tongue, glance at the tonsils, and pronounce them "normal or absent", is not enough. To make a proper examination, both hands of the examiner should be free, and, therefore, a good forehead light or head mirror should be used. With one spatula depress the tongue, and with the end of a second tongue depressor, held with the edge vertical, press against the anterior pillar and slide from above downward, maintaining constant prssure. With this procedure, tonsils which were supposed to be "absent" will frequently come into view, and others which looked "small and normal" will appear in their true color and texture—red, fibrous and edematous, with yellow fluid oozing from their crypts.

The author believes this simple technique would bring to light many infected tonsils which have been the hidden cause of disease.

Biology of Human Population

Leonard Wing, of the department of zoology of the State College of Washington, Pullman, has received a special grant for the study of the biology of human population, according to *Science*. The work will be based on the data of fifteen thousand Quaker families from the monthly meeting records, beginning in 1650. The project parallels a study of animal population made by Professor Wing which is now nearing completion.

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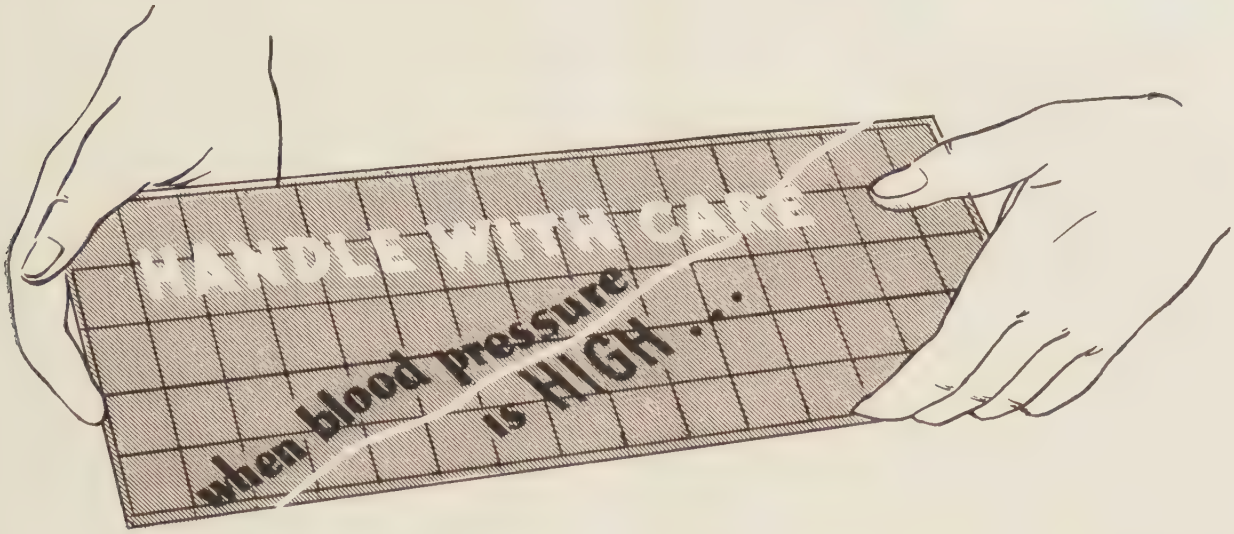

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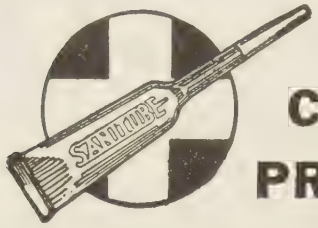

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Hospital Train for Overseas

The first overseas type hospital train visited the New York area recently on its way to a West Coast training center. This is the first train of this type built specifically for evacuating wounded from the battle area to base hospitals, and has been specially constructed to meet the requirements of foreign rail beds, safety, comfort, convenience and full effectiveness. All personnel operate as a unit and will continue with the train wherever it goes. Although it is intended primarily for transporting sick and injured soldiers over comparatively short distances, emergency operations can be performed in any ward car. At present there are six of these, each accommodating sixteen patients, a kitchen car, utilities car providing heat, power and electricity, and two personnel cars for officers and enlisted men. Four wheel trucks on the cars make for smoother riding. Other features include a pressure ventilating system, complete sterilization units, and fluorescent lighting throughout.

Major Thomas Purser, Jr. of McComb, Miss. is commanding officer. Capt. F. S. Waesche of Snow Hill, Maryland, Capt. F. J. Lancaster, N. C. and Capt. Louis Levin of Brooklyn, N. Y. complete the officer personnel. In addition there are six nurses, and thirty-three enlisted men, all technical specialists with training in medical work or other duties essential to the operation of the train unit.

In Harrisburg, a woman was found who for thirty years wore Christmas seals on her chest to prevent tuberculosis.

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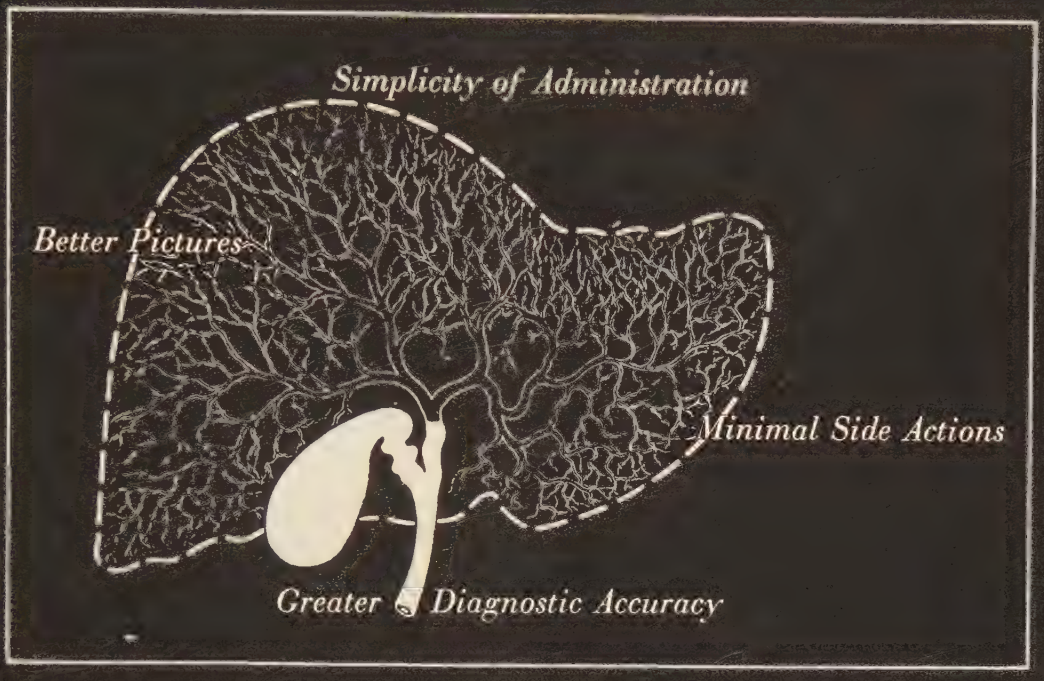

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Vesalius Anniversary

The four hundredth anniversary of the publication of Andreas Vesalius's book on human anatomy, *De humani corporis fabrica,* one of the "great landmarks in human knowledge," was observed last October in the Historical Library at the School of Medicine in Yale University, with an exhibition of the work of Vesalius and his followers, and a program of four papers by distinguished scholars.

When Dr. Harvey Cushing, Yale '91, died in October 1939, he was at work on a life of Vesalius and a description of the books he had written. His work fascinated Dr. Cushing, who made a collection of everything that related to Vesalius and his work. The Cushing library contains the most complete collection of Vesaliana ever brought together by a private collector.

Dr. William Willoughby Francis, librarian of the Osler Library at McGill University, presided at the exercises. Professor Ernst A. Cassirer, visiting professor of philosophy, spoke on the place of Vesalius in the culture of the Renaissance. The printer to the University, Carl P. Rollins, discussed the typographical problems encountered by Oporinus, Vesalius's printer and publisher. Dr. Edward Clark Streeter elucidated the period of Vesalius as a student in Paris, and Professor Arturo Castiglioni, research associate in the history of medicine, formerly of the University of Padua, discussed the controversies which arose as a result of Vesalius's break with traditional anatomical teaching.

As a medical student, Vesalius first attracted attention by a brilliant dissection of the spermatic vessels. This work was mentioned by his teacher, Winter of Andernach, in a book published in 1536. At the age of twenty-three, Vesalius was appointed professor of surgery at the University of Padua, and had published his six anatomical tables with the assistance of Titian's pupil, Jan van Calcar, in which was included the first accurate portrayal of the human skeleton. In 1543, Vesalius issued his magnum opus, *De humani corporis fabrica,* which marked the beginning of our knowledge of the physical structure of man.

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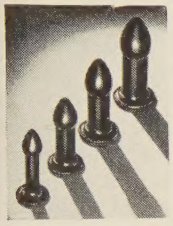
New Draft Methods Will Screen Psychoneurotics

Colonel Arthur V. McDermott, New York City Director of Selective Service, recently announced a new method for pre-induction detection of draft registrants suffering from psychoneurosis. This involves preliminary checking of files of State mental institutions, the Social Service Exchange, the registrant's school record, and if psychoneurotic indications come out of this survey, further investigation by discussion with the registrant's present and former employers, his family or friends. This investigation is carried out by the Medical Field Agent attached to the future inductee's draft board. Four great advantages are expected from this method of anticipating psychoneurotic disorders among inducted men. Expense in training is saved, disruption of the lives of the men themselves is saved, normal men in the armed services are protected against the possible dangers implicit in the breakdown of one of their fellows on the field of battle, and the government is spared the cost of prolonged hospitalization in such cases.

Only the medical officer at the induction station will receive any information pointing to psychoneurotic weakness by the Medical Field Agents to guide him in deciding upon a man's mental fitness for war service. Colonel McDermott stressed the fact that psychoneurosis is a potential and not an actual condition, which in all likelihood will cause no handicap to the individual in ordinary civilian life to which he has adjusted himself. Statistics show, however, that mental or emotional disorders have been precipitated in men formerly passed as fit by the strain of adjusting to new and difficult siuations to the extent that "it would have been far better for all concerned if those men had never been inducted".

The new method of screening protects the registrant's privacy, saves endless possible trouble, and the fact that a man has adjusted himself to his surroundings and has held down a job should cause employers no concern in rehiring him if rejected or discharged under these circumstances. He is perfectly all right for ordinary work.

PSYCHIC CONSTIPATION caused by unconscious fear and usually resistant to other forms of therapy



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Affiliated Base Hospital Units

The U. S. Office of Civilian Defense announces that ninety-three hospitals and medical schools throughout the country have completed the formation of affiliated base hospital units and surgical teams, which will be available to either OCD or the Army in the event of need for setting up emergency hospital facilities in their respective areas. Each unit is composed of fifteen physicians, surgeons and other specialists, and forms a balanced professional staff. The War Department will call upon the units to staff extemporized hospitals should there be a sudden extraordinary military necessity requiring hospital medical care beyond the immediate facilities of the Army in any particular locality. OCD will use these units and surgical teams to supplement the staffs of "emergency base hospitals" located in relatively safe zones near critical areas should it become necessary to evacuate patients from these areas.

Physicians accepted for service in the units receive commissions in the reserve of the U. S. Public Health Service but will not be called to active duty by the Surgeon General (U.S.P.H.S.) except at the request of OCD, through the respective State Chiefs of Emergency Medical Service. When a unit is needed, the physicians of the unit will be placed on active duty only for the duration of a particular emergency in order to prevent further depletion of the civilian doctors.

It is announced that forty out of the planned fifty affiliated base hospital units and surgical teams sponsored by hospitals and medical schools in California, Nevada, Arizona, Washington, Oregon, Utah, Idaho, and Montana have been completed.

Wartime Diet of Chinese Soldiers

T. Shen (*Science*, Oct. 1, 1943) reports on the diet of South China soldiers as compared with that of men college students at Kunming. The basic soldier ration amounts to 953 grams of rice, 274 grams of leafy vegetables, ten grams of fat, and thirteen grams of salt. The college student receives 423 grams of rice, 125 grams of leafy vegetables and tomatoes, forty-eight grams of tubers and roots, and sixty-eight grams of meat and eggs.

The soldier ration seems to provide enough calories for physical work for an adult, protein from rice, enough iron, barely enough calcium, but too much phosphorus from rice. Fat was insufficient. Leafy vegetables were the only source of vitamin A as carotene, and vitamin C. Low grade rice furnished antiberiberi vitamin.

Men college students had a better diet than the soldiers in protein and fat, with more variety, but low in minerals and probably in vitamins. About fifty percent of students given the urine saturation test for vitamin C deficiency proved subclinical cases. Ascorbic acid sent by Cornell University cured many who had bleeding and spongy gums from vitamin C deficiency.

Measurements of soldiers indicated passable nutrition. Height-weight relationship was found to be about normal for average southern Chinese. Medical examination, however, showed vitamin B deficiency in groups where polished rice was used and rice water wasted. Where roots were substituted for leafy vegetables vitamin A and mineral intake was cut very low The Chinese soldiers were allowed almost no sugar.

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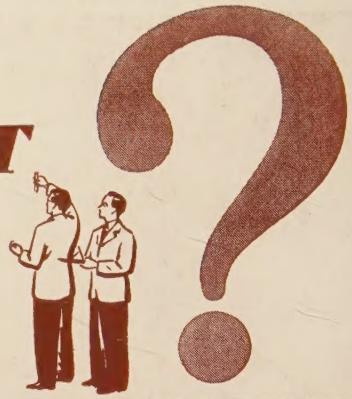

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